



Commonwealth of Massachusetts Department of Fish & Game

Mary B. Griffin, Commissioner

DIVISION of ECOLOGICAL RESTORATION

Tim Purinton, Director

Ebb & Flow

An electronic newsletter from the Massachusetts Division of Ecological Restoration

Ebb&Flow #12

April, 2012

An electronic newsletter from the Massachusetts Division of Ecological Restoration (DER)

<http://www.mass.gov/dfwele/der>

Greetings, restoration friends and colleagues,

Spring invariably brings a crush of exciting work and a renewed energy. It's hard to look back this time of year as optimism abounds for the upcoming warm months, but if you don't mind reflecting for a moment [our 2011 Annual Report is available online](#) and puts in concise, readable format the fruits of our labor, much of it would not have happened without your assistance and partnership.

DER's Annual Report emphasizes the economic benefits of ecological restoration and how river and wetland restoration create jobs and spur economic activity. The Annual Report cites the results of a recent economic evaluation commissioned by DER. There have been other national reports that examine the nexus between jobs and restoration implementation, but none that look as thoroughly at our work in Massachusetts. *Ebb&Flow* 12's lead article, by Nick Wildman, also outlines the key findings of this report, and we are proud to share the news of how we are assisting in our small way in the recovery of the Massachusetts economy.

See you on the water --

Sincerely,

Tim Purinton, Director

Hunt Durey, Acting Deputy Director

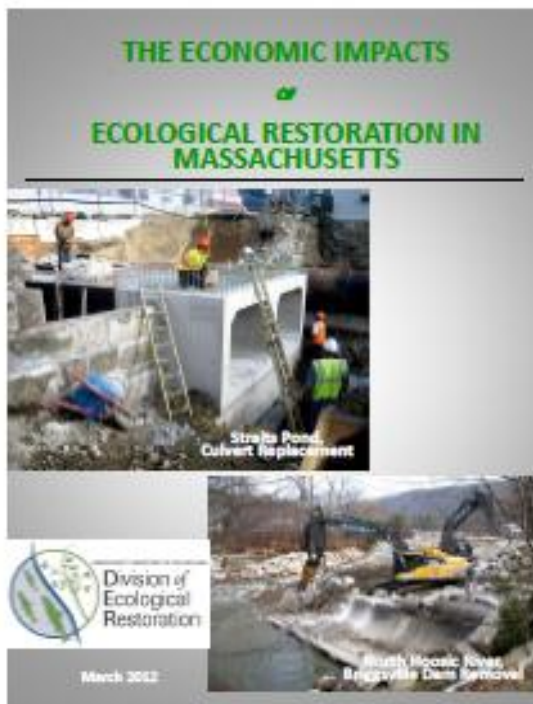
P.S: The DER has just posted a Request for Responses (RFR) seeking nominations for Aquatic Habitat Restoration and Revitalization Priority Projects. Selected projects will be eligible to receive technical assistance from DER staff, technical services by qualified contractors paid for by DER, and/or direct grant funding. While the pre-RFR opportunity to discuss projects with DER staff is now closed, you might nevertheless want to look at the [pre-RFR announcement](#) to get an idea of the types of restoration projects DER is looking to assist. To access the RFR once

it is posted, go to <http://www.comm-pass.com>, Click on “Search for a Solicitation” at the bottom of the page, and then enter DER 2012-01 into the “Keywords” box. The **deadline** to respond is **May 2**.

P.P.S.: DER compiles an annual [*Rivers and Wetlands Months Calendar*](#), listing all the public paddling trips and other river- and wetland-related activities taking place in the Commonwealth during May (Wetlands Month) and June (Rivers Month). The **2012 Calendar** will cover the period from **Saturday, April 28** to **Wednesday, July 4**. So, if you know of an event taking place during that time, please feel free to send an e-mail about it to [Russ Cohen](#).



Feature Article:



Economic Impacts from Ecological Restoration

DER's work is part of the Massachusetts "Restoration Economy"

By Nick Wildman

If you follow the stock market or the player trades in pro sports, you know all about value. Warren Buffett is characterized as a “value investor” because he takes advantage of opportunities to buy affordable companies with little competitive pressure. The Boston Red Sox traditionally trade for the lesser-known names with big potential (albeit with variable results). In either situation, it's about looking for low-risk trades with a huge potential for investment return. For Division of Ecological Restoration (DER) staff and partners, we pour blood, sweat, and tears into ecological restoration projects knowing the full impact of our work is not always clear. To help elucidate the largely hidden economic impacts of restoration, DER partnered with experts at [Industrial Economics, Inc.](#) to estimate economic benefits from our dam removal, culvert replacement, and wetland restoration work.

Restoration practitioners often opine about how long their projects take to plan and permit, then construction is over in a day. But all that time and effort, from the initial data collection to the post-construction monitoring, translates into real jobs, and the benefits to the environment from the work add more economic returns for years to come. Ecological restoration projects tend to proceed through a series of phases: data collection, design and

permitting, implementation, and monitoring. At each step of the way, a number of scientists, advocates, and engineers play interrelated roles to move the project to the next phase. The process is fueled by grants from state and federal agencies, contributions from private landowners, and donations from conservation-driven organizations. DER leverages its funds to bring in many times that amount from our partners. It's usually easy to tally up the costs for a given phase, but how do dollars spent make their way through the economy? How many people are put to work when a community decides to upgrade its failing, undersized salt marsh crossing? What are the ripple effects of a dam owner deciding to restore a free-flowing river? What about the value of flooding protection or increased biodiversity?

In 2011, DER took a first step at getting some answers to these questions. To start we identified a realistic scope for this investigation. DER has led or supported over 100 restoration projects in the last 10 years. Even with the best data, analyzing the economic effects of all that work could take years. So, in coordination with the Cambridge-based consulting firm [Industrial Economics](#), we selected four projects that represent the majority of work we do to improve aquatic habitats: dam removal; culvert replacement; fill removal; and former cranberry bog naturalization (which usually integrates the other activities). The projects also featured a range of locations and habitat types in Massachusetts, from Cape Cod to the Berkshires.

The general findings of the study are:

- DER leverages state dollars at a ratio of **12 to 1** (non-state funding to state funding) and attracts millions of competitive federal dollars annually into the Massachusetts economy.
- Restoration projects produce an average employment demand of 12.5 jobs and \$1,750,000 in total economic output from each \$1 million spent, contributing to a growing “restoration economy” in Massachusetts.
- Ecological restoration helps support a number of economic sectors, including design and engineering, construction, wholesale construction materials, nursery products, and non-profit science.
- The “ripple effects” from a dollar spent on ecological restoration travel widely through the Massachusetts economy because of this diversity of contributing sectors and the non-export nature of the projects.
- Restoration projects generate total economic outputs equal to and sometimes greater than other types of capital projects such as road and bridge construction and repair, replacement of water infrastructure, etc.

This study is a first step in understanding the beneficial effects of ecological restoration projects on the Commonwealth's economy, and the positive findings from this first analysis are significant yet conservative (i.e., they probably understate the beneficial economic impact of restoration). Recently, similar studies of economic effects from restoration work across the nation have shown somewhat greater returns than those found by this study. Variability in economic model inputs, project types, and scope of benefits analyzed likely contribute to the differences in results.

In addition, while not included in the scope of this study, the **ecosystem services values** produced by our partner-based projects (e.g., water quality improvement, flood damage reduction, and increased biodiversity and fisheries production) generate very substantial, recurring economic benefits. One of the best things about these kinds of benefits is that they keep accruing long after the excavators and dump trucks have moved on to other jobs. DER is pursuing partnerships with researchers and graduate students from leading universities to help enumerate these values.

Click [here](#) to download (in .pdf format) the summary of the Industrial Economics, Inc. analysis of the economic effects from four DER projects and [here](#) to read the press release. For more information on this study or potential next steps, contact Nick Wildman at (617) 626-1527 or nick.wildman@state.ma.us.

The Massachusetts Integrated List of Waters – an opportunity to find out about (and comment on) water quality in the Commonwealth's rivers and streams

Sections [303\(d\)](#) and [305 \(b\)](#) of the **federal Clean Water Act** (currently [celebrating its 40th anniversary](#) – see more about that elsewhere in this newsletter) require each state to submit biennial reports to the U.S. EPA on the status of its waterways, e.g., reporting on waters meeting “[fishable/swimmable](#)” standards as well as listing [impaired waterways](#) (i.e. surface waters determined not to meet their [designated uses](#) set out in each state’s [water quality standards](#)). The EPA then collaborates with the states to set timetables for and implement measures (such as [TMDLs](#) or “total maximum daily loads”) designed to mitigate the water quality problems identified in the reports (click [here](#) for more info).

The Mass. Department of Environmental Protection (MassDEP) recently posted an announcement on its web page (click [here](#) - scroll down) stating that a document prepared by MassDEP’s [Bureau of Resource Protection](#) (BRP) entitled the ***Proposed Massachusetts Year 2012 Integrated List of Waters (CWA Sections 303d and 305b)*** is available for public review and comment (until **April 30**) . This report is a proposed listing of the status of the Commonwealth’s waterbodies, including those that have been assessed and determined not to fully meet the [Massachusetts Surface Water Quality Standards](#). [Click [here](#) to download an MS Word version and [here](#) to download a .pdf version of the ***Proposed 2012 Integrated List***.]

In addition to the actual proposed listing of the individual categories of waters (i.e., a **specific enumeration of waterways deemed to be impaired, and the type(s) and known or suspected cause(s) of the impairment**), the report presents a **brief history of water quality management in Massachusetts** and presents a brief overview of the [water quality monitoring](#) and other methodology currently employed for assessing and reporting on the status of Massachusetts waters. The *Proposed 2012 Integrated List* is based primarily on [new watershed assessments](#) completed for the **Blackstone, Boston Harbor** (including **Mystic, Neponset and Weymouth/Weir**), **Merrimack** and **Parker** watersheds and the **Cape Cod** coastal drainage areas.

While it would be especially useful to anyone living, working or otherwise concerned or curious about the water quality of waterways in the recently assessed watersheds highlighted above, **reading the *Proposed 2012 Integrated List* should be of value to anyone interested in the condition of the Commonwealth’s surface water resources**, both for the history and overview, as well as the water quality assessment data for specific watersheds and waterways you may be concerned about.

The *Proposed 2012 Integrated List* represents many hours of careful and assiduous work conducted by MassDEP BRP staff engaged in water quality monitoring and other data collection and analysis. Nevertheless, you and/or your watershed group might be aware of conditions affecting water quality (like an unreported pollution source, or the cessation of a pollution source that previously existed), where sharing such information with DEP could help improve the final version of the document that will be eventually submitted to the EPA. If so, comments should be submitted in writing to the following address **no later than April 30, 2012**) to: MassDEP, Division of Watershed Management, 627 Main Street, Second Floor, Worcester, MA 01608, Attn: Arthur S. Johnson [(508) 767-2873].

[Click [here](#) to see an Integrated Waters GIS map, and [here](#) to read the ***Surface and Groundwater section of MassDEP’s Environmental Progress Report for FY 2012***, which is also useful in understanding how MassDEP assesses water quality and quantity conditions in the Commonwealth’s surface and ground waters, and reports their findings to the EPA and shares with the public.]



Division of Ecological Restoration News and Project Updates

River Instream Flow Stewards (RIFLS) Update

By Laila Parker



Michelle Craddock of DER's RIFLS staff measuring unusually low streamflow in Billings Brook in Sharon. Note the exposed streambed rocks, which ordinarily would be covered with water this time of year.

We've had a dry winter and spring to date, and DER's River Instream Flow Stewards (<http://www.rifls.org>) are busy documenting what this means for rivers and streams across Massachusetts. For example, RIFLS volunteer data indicate that average flows this March at Billings Brook, a tributary to the Neponset River, are about half the rate of the brook's average March flow (measured since 2008). RIFLS staff visited the site on March 26 and measured low flow levels which aren't typically observed until May or June. Volunteers report that the upstream gage in First Herring Brook, a tributary to the North River, reached the lowest level ever reported in March in the nine years they have been reading this gage. Multiple [USGS stream gages in eastern Massachusetts](#), which cover more years and more frequent readings than RIFLS gages, have set daily records in recent weeks for low streamflows.

While natural streamflow is variable, we expect high flows in spring as the snows melt, and these flows are crucial to sustaining healthy aquatic ecosystems. Our aquatic and other water-dependent organisms and ecosystems have some built-in resilience to withstand the occasional dry period. Yet the below-normal snowfall our region experienced this past winter could be foreshadowing a new trend, according to climate scientists, meaning that the low flows these RIFLS volunteers are recording in recent weeks could become a much more common (and troubling) occurrence in subsequent years.

Red River Beach Salt Marsh Restoration Project, Harwich



View of a recently-poured concrete leveling pad, upon which will sit the new larger culvert conveying tidal flow to and from the salt marsh behind Red River Beach in Harwich.

Construction is now well underway at the Red River Beach Salt Marsh Restoration Project in Harwich where two under-sized road culverts have restricted tidal flow to the upstream marsh for many decades. Reduced tidal influence has significantly impaired the condition of eight acres of coastal wetlands behind this popular town beach, resulting in negative impacts such as poor water quality, degraded wildlife habitat, and the spread of non-native, invasive plant species. Restoration of more natural tides and salt water influence will help improve the health of this marsh system and enhance the important ecological services it provides to fisheries, wildlife, and the Harwich community.

The Town of Harwich is partnering with DER and the Cape Cod Conservation District to complete the project. The majority of project funding is being provided by the Natural Resources Conservation Service through the [Cape Cod Water Resources Restoration Project](#). The Harwich Highway Department is doing the culvert replacement work, which is anticipated to be completed by the end of this spring.

From the Cape Cod Water Resources Restoration Project Blog:

[Water gets cleaner beneath your feet at Duck Creek, Wellfleet](#)



One of the most photographed sites on Cape Cod is Uncle Tim's bridge in Wellfleet. Few people know however that the water quality under this bridge has been affected by the nearby roads and parking lots. Like many asphalt roads and parking lots near open water, the streets have been channeling untreated surface water – stormwater – into Duck Creek because of their large impervious surface areas. Stormwater usually carries contaminants such as fertilizer and bacteria that flow directly into surface water if not first caught and filtered. Click [here](#) to read how water is getting cleaner through a stormwater improvement project under these Wellfleet streets and to see a video slideshow of how the project evolved.



Resources and Grants

Grant, Prize, Fellowship, Contest, Award, Fundraising, etc. Opportunities

(presented in rough chronological order by application/nomination/entry deadline)

The U.S. EPA's [Green Infrastructure Program](#) is [seeking applications for direct assistance to facilitate the use of green infrastructure to protect water quality](#). Technical assistance will be provided through EPA contract support, and will be directed to watersheds/sewersheds with significant **water quality degradation associated with urban stormwater**. The total EPA assistance available is approximately \$950,000, and will be distributed among 10-20 projects. The value of the assistance available to each project will be approximately \$50,000 - \$100,000. **Letters of interest must be received by April 6, 2012.** Click [here](#) or contact Christopher Kloss at Kloss.Christopher@epa.gov for more info.

The EPA is currently (until **April 6th**) accepting nominations for the [11th Annual National Award for Smart Growth Achievement](#). This competition is open to public- and private-sector entities that have successfully used smart growth principles to improve communities environmentally, socially, and economically. Winners will be recognized at a ceremony in Washington, D.C. in December 2012. Click [here](#) for more info.

The goal of the [North Face Explore Fund](#) is to inspire the next generation of young explorers and conservationists by supporting nonprofit organizations throughout the country that help kids discover nature's playground. Grants of up to \$2,500 are provided to **organizations that encourage youth outdoor participation**, focusing primarily on **creating more connections of children to nature**, increasing access to both front and backcountry recreation, as well as providing education for both personal and environmental health. Funded programs should seek a specific audience and reach out to a specific community or place of interest. The **application deadline** is **April 6, 2012**.

The Nature Conservancy (TNC), in partnership with the **National Oceanic and Atmospheric Administration (NOAA)**'s [Community-Based Restoration Program](#), is seeking proposals for their [TNC-NOAA Community-based Habitat Restoration Grants](#), for projects at TNC priority sites throughout the United States and its territories to restore or enhance estuarine, marine, and anadromous species and their habitats. For details, see the [Request for Proposals](#) (PDF, 315 KB). Proposals are **due by April 13, 2012**. Contact Eric Hutchins (NOAA) at (978) 281-9313 or Eric.Hutchins@noaa.gov, or Jennifer Greene (TNC) at (617) 532-8353 or jgreene@tnc.org for more info.

The Mass. Department of Environmental Protection (MassDEP) is seeking proposals for the [§319 Nonpoint Source Pollution Competitive Grants Program](#) to fund comprehensive projects that address nonpoint sources of pollution affecting water quality. To access the RFR, go to <http://www.comm-pass.com>, click on "Search for a Solicitation" at the bottom of the page, and then enter BRP 2012-02 into the "Keywords" box. DEP will hold a public info session for prospective applicants on **April 14** from 10:00 AM to noon at [MassDEP's Worcester regional office](#). Full proposals are **due by June 1, 2012**.

Each year, the [Environmental Business Council of New England \(EBC\)](#) recognizes companies, organizations and individuals for outstanding environmental/energy accomplishments in the promotion of a sustainable, clean environment through its [EBEE Awards](#), presented each year in June at the EBC's Annual Award Celebration. These awards were established by the EBC to encourage companies, government agencies, non-profit organizations, and environmental professionals to serve as models for others to emulate and, in doing so, further the mission and objectives of the EBC. You are encouraged to self nominate and to nominate programs and/or projects where your company (perhaps working with other EBC member companies) has been an active participant. [Nominations](#) are being accepted (until **Tuesday, April 17, 2012**) in the following categories:

- [The Paul G. Keough Environmental-Energy Award for Government Service](#)
- [The John A.S. McGlennon Environmental-Energy Award for Corporate Leadership](#)
- [The Stephen G. Lewis Environmental-Energy Merit Award for Service to the Environmental Industry](#)
- [The Nicholas Humber Environmental-Energy Award for Outstanding Collaboration](#)
- [The EBC Environmental-Energy Merit Award for Leadership by a Non-Profit Organization](#)
- [The James D.P. Farrell Award for Brownfields Project of the Year](#)
- [The EBC Outstanding Environmental-Energy Achievement Award](#).

The [Parker River National Wildlife Refuge](#) has initiated a [Slow the Flow Campaign](#) to improve water quality in the Plum Island Estuary. The Refuge is **offering landowners 5-10 grants of \$500-\$1000 each to make backyard landscaping more environmentally friendly**. The **deadline** for application is **April 20** and **awards** will be **announced May 4**. Examples of eligible projects include those which reduce impervious surfaces, create rain gardens and native landscaping buffers, or convert lawn care from conventional to organic methods. Click [here](#) for more info.

The U.S. EPA's [Pollution Prevention \(P2\) Grant Program](#) funds **state and tribal technical assistance projects to help businesses identify better environmental strategies and solutions for reducing or eliminating waste at the source**. Eligible applicants include the fifty states, any agency or instrumentality of a state, **including state colleges/universities** and federally-recognized tribes; local governments, private universities, for-profit organizations, nonprofit organizations, private businesses, and individuals are **not** eligible. The application **deadline** is **April 24, 2012**; click [here](#) for more info.

The purpose of the [Massachusetts Agricultural Environmental Enhancement Program](#) (AEEP) is to support agricultural operations that are looking to **install conservation practices** that prevent direct impacts on water quality, ensure efficient use of water, as well as address impacts on air quality. Farmers selected to participate in the program are reimbursed up to \$25,000 for the cost of materials and labor necessary for the installation of the approved practice. Some examples of conservation practices eligible for funding include: manure waste storage, irrigation efficiency, water control structures, pesticide storage facilities, and fencing to keep livestock out of a water resource. The application **deadline** is **April 30th, 2012**; click [here](#) or contact Laura Maul at (617) 626-1739 or laura.maul@state.ma.us for more info.

[FishAmerica](#), in partnership with the [NOAA Restoration Center](#), awards **grants to nonprofit organizations, local communities and government agencies to restore habitat for marine and anadromous fish species**. Successful proposals have community-based restoration efforts with outreach to the local communities. The partnership requests proposals for local efforts to accomplish meaningful on-the-ground restoration of marine, estuarine and riparian habitats, including salt marshes and freshwater habitats important to diadromous fish species (fish that migrate to and from the sea). Projects must result in the implementation of locally-driven habitat restoration projects that emphasize stewardship and yield ecological and socioeconomic benefits. The **deadline** for submitting proposals is **April 30, 2012**. Click [here](#) to apply and [here](#) for more info.

The [National Fish and Wildlife Foundation](#) (NFWF), along with its partners, recognizes the important role Refuge Friends organizations play in building critical community support for the [U.S. Fish and Wildlife Service's National Wildlife Refuge System](#). NFWF's [National Wildlife Refuge Friends Group Grant Program](#) seeks proposals for projects that assist organizations to be effective co-stewards of our Nation's important natural resources within the National Wildlife Refuge System. This program provides competitive seed grants (\$1,500 - \$5,000) to creative and innovative proposals that seek to increase the number and effectiveness of organizations interested in assisting the Refuge System nationwide. The application **deadline** is **April 30, 2012**. Click [here](#) or contact NFWF's staff representative Teal Edelen at teal.edelen@nfwf.org for more info.

The Chicago-based [Frankel Family Foundation](#) "believes that the future health of our planet and all its inhabitants requires that we protect the delicate balances that exist in nature. The rate and scale of ecosystem degradation is significantly weakening the ability of the natural world to regulate the climate, purify air and water, provide home to native species, and provide medicines and protection from natural disasters...[The Foundation seeks] to support work that preserves native, carbon rich and biologically diverse environments and promotes a balanced relationship between local peoples and these unique and increasingly rare natural areas." The Foundation supports a range of activities including: promoting local stewardship and governance; aligning regulatory and economic incentives with ecosystem stewardship; developing sustainable economic alternatives; and action research that informs local solutions and policy reform. While the Foundation considers grant proposals on an invitation-only basis, it accepts brief letters of inquiry on a rolling basis (letters received **before the end of April** are more likely to be considered at the Foundation's annual grant round). Click [here](#) to read the grantmaking guidelines and [here](#) for info on how to apply for funding.

The [Gulf of Maine Council on the Marine Environment](#) is seeking nominations for its annual [Visionary, Longard, Susan Snow-Cotter Leadership, Industry, and Sustainable Communities Awards](#). Visionary Awards will be presented to one individual and one organization in each state and province bordering the Gulf. The Longard Award will be presented to an outstanding volunteer within the Gulf watershed. The Susan Snow-Cotter Award will recognize a coastal management professional who exemplifies outstanding leadership or exceptional mentoring in the Gulf of Maine watershed. The Industry Award will go to a business that has shown leadership in efforts to improve the well-being of the Gulf of Maine ecosystem.

New this year, the Sustainable Communities Award will go to a community of group within a community that exemplifies a sustainable environment and economy. Submit nomination forms by **April 30** to info@gulfofmaine.org – click [here](#) for more info.

From March 30 to **April 30**, the [National Mayor's Challenge for Water Conservation](#) campaign wants mayors to take a leadership role for future of water. A group of federal, non-profit, and local organizations are asking mayors across the nation to compete to see who can inspire the most residents in their cities to become the most “water wise”. Cities with the highest percentage of residents who take the challenge win, and win great prizes such as a Toyota Prius. The [Alliance for Water Efficiency](#) is a partner. Click [here](#) and [here](#) for more info.

The [Sounds Conservancy Grants Program](#) is dedicated to supporting the conservation and restoration of the sounds of Long Island, Fishers Island, Block Island, Rhode Island, Martha's Vineyard, and Nantucket and their adjacent coastlines in Connecticut, **Massachusetts**, New York, and Rhode Island. The program encourages and supports projects that lead to improved marine and coastal resource management with funding up to \$2,500 available to university, college, and high school students, private individuals, and nonprofit organizations. **Applications must be postmarked by May 1, 2012**; click [here](#) to apply or for more info.

The [Conservation Alliance](#) is a group of outdoor businesses that **supports efforts to protect specific wild places for their habitat and recreation values**. Organizations interested in seeking funding from the Alliance must first be nominated by one of the Alliance's member companies ([click here](#) for a list of members -please contact only one member per funding cycle for nomination). Members nominate organizations by submitting a nomination form. Once that is done, the Alliance will send each nominated organization a request for proposal (RFP) instructing them how to submit a full request. **Deadlines** for the next (Summer 2012) funding cycle: Nominations due **May 1**; Proposals due **June 10**; and grants announced early October. Click [here](#) for more info.

The [National Fish Habitat Partnership](#) (NFHP) is a diverse group of organizations and individuals that seek to protect, restore, and enhance the nation's fish populations and their aquatic communities. NFHP carries out this mission through regional Fish Habitat Partnerships which identify priority habitats, develop achievable conservation strategies, and implement **voluntary, non-regulatory conservation projects**. [There are two main Fish Habitat Partnerships active in this region: the [Eastern Brook Trout Joint Venture](#) and the [Atlantic Coastal Fish Habitat Partnership](#).] [NOAA Fisheries](#) and the [National Fish and Wildlife Foundation](#) are soliciting **projects to support the protection of coastal and marine fish habitats** through NFHP Fish Habitat Partnerships. Habitats eligible for funding include freshwater and estuarine wetlands and riparian and riverine habitat (*for the purposes of this funding opportunity, the term “coastal” means habitats within 8-digit [HUCs](#) that contain the head of tide). **Pre-proposals are due May 1, 2012**; full proposals are due June 29. Click [here](#) for more info.

The [Mass. Executive Office of Energy and Environmental Affairs](#) (EEA)'s [Division of Conservation Services](#) (DCS) recently announced the **opening of its FY13 grant round** for several programs. Municipalities can apply for a [Local Acquisitions for Natural Diversity \(LAND\)](#) grant to acquire conservation land or a [Parkland Acquisitions and Renovations for Communities \(PARC\)](#) grant to the acquire parkland, develop a new park, or renovate an existing park. The grant award maximum for FY13 is \$400,000. The grant **deadline** is **July 12, 2012**. Municipalities with less than 6,000 residents are eligible for the [Conservation Appraisals and Open Space and Recreation Plans for Small Communities](#) grant program. This grant provides municipalities with funding for the development of Open Space & Recreation Plans (OSRPs) and appraisals for LAND grant applications. The **deadline** is **May 31, 2012**. **Non-profit organizations** can apply for a [Conservation Partnership](#) grant to acquire land. The FY13 grant award maximum is \$85,000. The deadline is **July 16, 2012**. For more information on the PARC or Conservation Partnership grants, please contact Melissa Cryan at melissa.cryan@state.ma.us or (617) 626-1171. Celia Riechel can provide more information on the LAND or Small Communities grant programs at (617) 626-1187 or celia.riechel@state.ma.us. DCS will also be hosting two “how to” grant workshops for potential applicants: **Thursday, May 10, 2012** at 10:00 AM in Boston at 100 Cambridge Street, 2nd Floor; or **Tuesday, May 15, 2012** at 11:00 AM in Amherst at 101 University Drive, Suite C4.

The **U.S. Forest Service** (USFS) is currently (until **May 15, 2012**) seeking applications for its [Community Forest and Open Space Conservation Program](#) (CFP), a [competitive grant program](#) whereby local governments, qualified nonprofit organizations and Indian tribes are eligible to apply for **grants to establish [community forests](#) through fee simple acquisition** (no CRs) **of private forest land that is threatened with conversion to non-forest uses**. The purpose of the program is to establish community forests by protecting forest land from conversion to non-forest uses and provide

community benefits such as sustainable forest management, environmental benefits including clean air, water, and wildlife habitat; benefits from forest-based educational programs; benefits from serving as models of effective forest stewardship; and recreational benefits secured with public access. Individual grant applications can't exceed \$400K, and cannot exceed 50% of the total project cost. **Applications are submitted to the State Forester** [for Mass., that is Peter Church, MA DCR, 251 Causeway Street, Boston, MA 02114, (617) 626-1461, (617) 626-1449 (fax), peter.church@state.ma.us], who in turn passes along recommendations to the USFS on or before June 14. In addition, all applicants must send an email to communityforest@fs.fed.us to confirm an application has been submitted for consideration. Click [here](#) and [here](#) for more info – also see [*Needs and Resources for Creating and Managing Community Forests*](#), published in 2011 by the [Trust for Public Land](#).

The Iowa-based [Leighty Foundation](#), a small family foundation, makes grants in several areas, including [earth protection](#) and [volunteerism and civic engagement](#). While the Foundation only considers invited proposals, organizations seeking funding may make initial contact through [Jill Haubert](#), executive associate, with a one-page letter that includes the mission of the organization, the need to be addressed, the intended outcome of the endeavor and the size of the grant requested. Organizations that are [invited to submit proposals](#) may do so until the **deadline of Friday, May 18, 2012**.

[EarthShare New England](#) is the regional arm of [EarthShare](#), an umbrella organization intended to **boost donations to its member organizations** through employee engagement and giving campaigns at [public and private sector workplaces](#) or [online](#). EarthShare New England's member groups represent well-respected and responsible environmental and conservation organizations (click [here](#) for a list of New England-based nonprofits currently enrolled in the program). **Is your nonprofit organization interested in becoming an EarthShare member charity?** EarthShare conducts a member consideration cycle once a year, which happens in the **late May** timeframe. For more information on the application process and [eligibility criteria](#), please contact Perry Bird, Director, Member Services, at perry@earthshare.org. Click [here](#) for more info.

The **Daymarc Foundation** (no web page) makes small grants to §501(c)(3) organizations or municipalities for education, conservation, landscaping, health and other purposes. The customary grant size limit to new organizations is \$350. Requests for funding should be submitted before the **May 31 deadline** to: Daymarc Foundation, 65 Woodridge Road, Wayland, MA 01778-3611, (508) 358-9933, daymarc@att.net.

The mission of [Boston University's Institute for Nonprofit Management and Leadership](#) is to educate, support, and connect the next generation of nonprofit leaders. The mission of the [Community Fellows Program](#) is to build a strong and talented cohort of young urban leaders, able to initiate social and organizational change in Boston, leading to greater diversity, social justice, community cohesion, and inter-community collaboration. The Program is a two-year, part time certificate program. Participants will be trained in the art of nonprofit management as well as the history and impact of social justice and community collaboration in Boston. The **deadline** to apply for the next class of Fellows is **May 31, 2012**; click [here](#) and [here](#) for more info.

The [Rachel Carson Sense of Wonder Contest](#) is an annual poetry, essay, photo and dance contest sponsored by the U.S. EPA. For 2012, to commemorate the [40th anniversary of the Clean Water Act](#), the U.S. EPA has renamed this year's contest the **Sense of Water Contest**. Teams consisting of at least one young and one older person are asked to share their love for water through a creative project that captures water around us. Contest submissions are encouraged to focus on the various properties of water – how it sounds, feels, tastes and looks – and what water means to the entrants. The **deadline** for entries is **June 1, 2012**, and winners will be announced in September 2012. A panel of judges will select finalists in each category, and the winners will be determined by a public online vote that will begin in August 2012. Click [here](#) for more info.

The [Walmart Local Community Contribution Program](#) provides support to local nonprofit organizations, government agencies, and K-12 schools and higher education institutions located in communities with Walmart Stores, Logistics Facilities, or Sam's Clubs. Churches and other faith-based organizations with projects that address the needs of the community at large are also eligible for support. Applying organizations must address one of the following focus areas: education, workforce development/economic opportunity, health and wellness, **environmental sustainability**, or hunger relief. Grants generally range from \$250 to \$5,000. Applications are accepted from February 1 through December 1, annually. Click [here](#) to apply or for more info.

[Acres for America](#), a partnership between Walmart Stores, Inc. and the [National Fish and Wildlife Foundation](#), provides funding for projects that conserve important habitat for fish, wildlife, and plants through acquisition of interest in real property. The goal of the Acres for America program is to offset the footprint of Walmart's domestic facilities on at least an

acre by acre basis through these acquisitions. The **annual deadline** for the submission of pre-proposals is **June 1**; click [here](#) for more info.

The [TKF Foundation's Open Spaces Sacred Places National Awards Initiative](#) supports the creation of public green spaces that offer temporary sanctuary, encourage reflection, provide solace, and engender peace and well being. The Initiative funds the development of significant new public green spaces in urban settings that demonstrate a combination of high quality design-build and rigorous research about user impacts. The Initiative's [final Request for Proposals](#) (RFP) seeks cross-disciplinary teams that are able to 1) conceptualize, plan, design, and implement an open and sacred green space; 2) conduct an associated research study; and 3) communicate scientific findings. Funded projects will serve as potential models for urban areas across the United States. A total of \$4 million is available through this RFP. The **application deadline** is **June 29, 2012**.

The Australia-based [International Water Centre Alumni Network](#) (IWCAN) recently announced a call for nominations for the [2012 River Management Young Achievers Award](#). Sponsored by [Thiess Services](#) and managed by IWCAN, the award identifies and rewards **individuals under 35 who have demonstrated innovation and excellence in river and waterways management**. The winner will receive AU\$3,000, with each of the runners-up receiving AU\$250. The finalists will present their work at the [15th International Riversymposium](#) in Melbourne in October. The nomination **deadline** is **July 15, 2012**. Click [here](#) or contact [Cameron Davidson](#) for more info.

The mission of the [Get to Know Your Wild Neighbours Program](#), established over a decade ago by famed Canadian wildlife artist and naturalist [Robert Bateman](#), is to **strengthen connections between children and nature in the outdoors**. Bateman believes that having students learn local species' names and characteristics will create increased awareness and understanding of wildlife, which will in turn instill increased empathy for the well-being of wild animals and their habitats. The [Get to Know Contest](#), newly-opened to U.S. contestants, invites all US residents 19 and under to get outside and **create original works of art, writing, photography, videography and music inspired by nature**. The goal is to be as creative as possible. For inspiration, check out some of the programs offered by Get to Know's U.S. [organizational sponsors](#) (see, e.g., the U.S. Fish and Wildlife Service's [Connecting with the Natural World](#) and [Let's Go Outside!](#) Pages). Entries are accepted from now until **July 16, 2012**; click [here](#) for more info.

[Home Depot Community Impact Grants](#), up to \$5,000, are available to registered 501(c)(3) nonprofit organizations, public schools, or tax-exempt public service agencies in the U.S. that **are using the power of volunteers to improve the physical health of their community**. Grants are given in the form of The Home Depot gift cards for the purchase of tools, materials, or services. Grant proposals are accepted until **August 13, 2012**. One of the identified project priorities is **planting trees or community gardens and/or landscaping community facilities that serve veterans**. Click [here](#) for more info.

The [Nordstrom Cares](#) program supports the communities the company serves (click [here for a store locator](#)). The company's support may take the form of a cash contribution, partnering with a local organization, or volunteering employee time. The company prefers to partner with organizations who champion arts and culture, education, health, community development and the environment, with diversity also playing a key role. Requests for support must be received by **October 1** for consideration in the subsequent year. Click [here](#) for more info.

[BJ Wholesale Club's Local Giving Program](#) provides support (usually in the form of gift cards or in-kind product donations) to community nonprofit organizations that primarily benefit children and families, enabling the company to have a direct and immediate impact on the communities the company serves (click [here](#) for a store locator). Requests for support are submitted to the nearest BJ's store and are accepted anytime, but should be submitted at least six weeks in advance of the event for which BJ's support is sought.

The [New England Grassroots Environment Fund](#) (NEGEF) recently launched its "new and improved" grants program. While NEGEF funding continues to be dedicated to grassroots community groups working on local environmental projects, groups can now [choose between "SEED" and "GROW" grants](#) to meet their funding needs. [SEED grants](#) are geared to groups launching new projects and/or evolving the scale of an existing project. SEED grants range in size from \$250 - \$1000 and can be applied for **any time**. [GROW grants](#) are geared to established groups who are ready to expand the scope of their work. Grow groups often have 1+ year experience running community projects and are ready to take on (pieces of) local system strategy around their issue. GROW grants range in size from \$1,000 - \$3,500 and have two **application deadlines** per year (March 15 and **September 15**). Both SEED and GROW Grants are intended to support community groups who represent the most exciting energy in the environmental movement and that are not being reached by traditional funders. Click [here](#) or contact NEGEF at (802) 223-4622 or info@grassrootsfund.org for more info.

The [Fidelity Foundation](#) funds organizations where it feels the Foundation “can add lasting, measurable value”, and supports “major initiatives that nonprofits undertake to reach new levels of achievement”. While the Foundation does not accept unsolicited grant proposals, if your organization has funding needs that you believe fit the Foundation’s [Guidelines](#) and [Selection Criteria](#), you may submit a [letter of inquiry](#) at any time detailing your organization and needs. Click [here](#) for more info.

The [Waste Management, Inc. Charitable Contributions Program](#) makes grants to §501(c)(3) groups for environmental education for Grades 6-12, community beautification, “**conserving and maintaining wetlands, wildlife habitats and green spaces for people's enjoyment**”, and other environmental projects, as well as to charities in the communities where the company (as well as its wholly-owned subsidiary [Wheelabrator Technologies](#)) does business. Applications are accepted year-round and are reviewed on a continuous basis (expect about a two-month review time). Click [here](#) for more info.

The mission of the [Biogen Idec Foundation](#) is “to improve the quality of people’s lives and contribute to the vitality of the communities in which we operate (one of which is **greater Boston**), with a special emphasis on innovative ways to promote science literacy and encourage young people to consider science careers”. Interested groups can take the short [eligibility quiz](#) (if you pass) can fill out an on-line application. Grant requests are considered on a rolling basis. Click [here](#) and [here](#) for more info.

The NYC-based [Jessie Smith Noyes Foundation](#) supports grassroots organizations engaged in community organizing and advocacy for a sustainable and just social and natural system. The Foundation makes grants to §501(c)(3) organizations in several topic areas, including **advancing environmental justice** and **sustainable agriculture and food systems**. Organizations seeking funding need to first fill out a [short online eligibility quiz](#), and then (if you pass) an online letter of inquiry. Contact the Foundation at (212) 684-6577 or write [Millie Buchanan](#) (Environmental Justice, ext. 15) or [Kolu Zigbi](#) (Sustainable Agriculture, ext. 16) for more info.

The **Stifler Family Foundation** (no web page) makes grants to land trusts and other environmental and charitable recipients in Massachusetts and other states, mostly in New England. Requests for funding should be submitted in writing and specify the purpose for which funds are sought. Submit to: Lawrence TP Stifler, 100 Codman Road, Brookline, MA 02445. Telephone: (617) 357-9876. There are no specified application forms or deadlines.

The **Tiedemann Foundation** (no web page) makes grants for conservation, education and other purposes in Massachusetts and elsewhere. Requests for funding should be submitted in writing and include a description of the organization and the proposed use of the requested funds, along with a copy of the IRS exempt determination letter, promotional material if available, and the name, address and telephone number of a contact person. Requests should be sent to: Edward G. Tiedemann, Jr., President, 656 Barretts Mill Road, Concord, MA 01742. Telephone: (978) 371-8444.

The **Nancy Draper Charitable Foundation** (no web page) makes grants to “charitable organizations concerned with environmental or conservation causes or the welfare and preservation of animals, including disease research.” Organizations seeking funds should submit a written request to Thomas Peckham, Bingham McCutchen LLP, One Federal St., Boston, MA 02110. There are no specified application forms or deadlines.

The **Burnham Foundation** (no web page) makes small grants to charitable organizations for educational and environmental purposes in Massachusetts and elsewhere. Requests for funding should be submitted in the form of a letter describing the organization and the proposed use of the funds sought. Send to: Burnham Foundation, Deborah J. McManus, c/o Nutter, McClennan and Fish LLP, 155 Seaport Blvd., Boston, MA 02205-8982. Telephone: (617) 439-2000.

The **Larsson Danforth Family Foundation** (no web page) makes grants for environmental and other purposes in New England and elsewhere. Organizations seeking funding should submit a letter of request, including the amount sought and the purposes for which the funding will be used, to: Fred C. Danforth or Carlene B. Larsson, 53 County Road, P.O. Box 1508, Mattapoisett, MA 02739. There are no specified application forms or deadlines.

The **Barrington Foundation** (no web page) gives small grants to a large number of environmental and other organizations in Massachusetts and elsewhere. Requests for funding should be submitted to: David Strassler, President, Barrington Foundation, P.O. Box 750, Great Barrington, MA 01230. There are no specified application forms or deadlines.

The **Gilbert Verney Foundation** (no web page) makes small grants to educational, cultural and conservation organizations, primarily in New Hampshire and Massachusetts. Requests for funding should be submitted to: Richard G. Verney, c/o Monadnock Paper Mills, Bennington, NH 03442. Telephone: (603) 588-3311. There are no specified application forms or deadlines.

The **Claudia and Steven Perles Family Foundation** (no web page) makes grants to conservation and other groups in Massachusetts and elsewhere. Requests for funding should be sent to: Claudia Perles, 6101 Aqua Ave., Unit 401, Miami Beach, FL 33101. There are no specified application forms or deadlines.

The **Eastman Charitable Foundation** (no web page) makes grants to §501(c)(3) organizations and municipalities in Massachusetts and adjacent states for educational and environmental purposes. Entities seeking funding should submit a letter summarizing the proposal, indicating the contact person, and enclosing a copy of the organization's IRS tax exemption letter. The customary grant size limit on newly-requesting organizations is \$500. Send grant requests to: William C. Hays, 31 Milk St., Suite 202, Boston, MA 02109. Telephone: (617) 423-5599. There is an annual December deadline.

The **Wellspring Foundation** (no web page) makes grants to educational and conservation organizations in Massachusetts and New York state. Requests for funding should be submitted in the form of a letter outlining the purpose for which grant funds are sought. Send requests to: Russell J. Bell, c/o Wellspring Foundation, 614 East High St., Charlottesville, VA 22902. Telephone: (434) 977-4420. There are no specified application forms or deadlines.

The **Windfall Foundation** (no web page) accepts requests for funding at any time without any stated geographical or subject matter limits. Requests should consist of a 1-3 page overview describing the project and the amount of the request, and include proof of the requesting organization's tax-exempt status. Requests should be submitted to: Shelby Miller, President, The Windfall Foundation, P.O. Box 1867, Santa Fe, NM 87504.



Calendar

(sorted chronologically by date of event, submission deadline, etc.)

[Doug Tallamy](#), author of the widely-acclaimed book [Bringing Nature Home: How You Can Sustain Wildlife with Native Plants](#), will be presenting a free lecture on **Saturday, April 7** at 10:00 AM at the Newbury Elementary School, 63 Hanover St in Newbury. The lecture is sponsored by the [Parker River National Wildlife Refuge's Slow the Flow Campaign](#). Click [here](#) for more info.

In 2005, a group of artist and designers rolled out some sod grass in a parking space on a street in Downtown San Francisco. They popped some quarters into a parking meter and declared the spot a temporary urban park. Five years later, their [Park\(ing\) Day](#) concept had spread to 952 "park(ing) spots" in 162 cities and 35 countries around the world and San Francisco's City Planning Department had instituted an official "[Pavement to Parks](#)" program. [The 2012 celebration of Park(ing) Day takes place on **September 21** – click [here](#) for more info on how to participate.] A panel discussion entitled [Wikicity: How Web-Enabled, Citizen-Driven Initiatives Are Redesigning the Urban Interface](#) will explore how web-enabled, citizen-driven "tactical urbanism" concepts are changing the way we plan, design and program urban public space. The event will take place on **Monday, April 9** from 6:30 PM to 8:30 PM at Piper Auditorium at the Harvard Graduate School of Design, 48 Quincy St. in Cambridge. Participants in the program include Mike Lydon, Principal of [Street Plans Collaborative](#) and Aurash Khawarзад of [Do:Tank](#), co-authors of [Tactical Urbanism](#); Ben Berkowitz, CEO of [SeeClickFix.com](#); and Erin Barnes, CEO of [Loby.org](#). Write to syoung@gsd.harvard.edu for more info.

In New England, stormwater is the leading cause for water pollution. Fortunately, there are effective practices to prevent and fix the runoff problems that damage private property, harm stream life and spoil uses of streams, lakes and water supplies. The [Massachusetts Watershed Coalition](#) (MWC) is sponsoring a workshop entitled [Community Stormwater Solutions: Keeping Streams & Lakes Healthy](#) on **Thursday April 12** from 4:00 PM - 8:30 PM at Worcester State University. The keynote speaker, EPA Region 1 Administrator Curt Spalding, will share stormwater updates with a focus on the EPA's new [Soak Up The Rain Campaign](#) that helps people reduce polluted runoff. The meeting also [features workshops](#) about "growing greener", aquatic ecosystems, low-cost runoff remedies, erosion control, porous paving, BMP ratings and more. Expert speakers will offer practical guidance for municipal officials, town planners, lake and pond groups, watershed organizations,

highway departments, home builders, engineers and concerned citizens. The \$10 registration fee (\$5 for students) includes meeting materials and refreshments. Click [here](#) or call (978) 534-0379 to register or for more info. [See also the MWC's [Billion Gallons a Year Campaign](#), and click [here](#) to learn more about the similarly-themed "Slow the Flow" campaign for the Plum Island estuary.]

The [New England Estuarine Research Society](#) (NEERS) will hold its [Spring 2012 Meeting](#) in Plymouth, MA from **April 12-14**. Meeting presentations and field trips will be on a variety of topics related to estuaries and coastal environments. Click [here](#) for more info.

The [Environmental Business Council of New England](#) (EBC) is hosting its [8th Annual Environmental, Energy & Engineering Career Fair](#) on **Friday, April 13, 2012** from 11:00 AM-3:00PM at the [Lenox Hotel](#) in Boston. In addition to a panel discussion, the Career Day features regional leaders in environmental and energy engineering, consulting, law and policy, as well as government agencies and non-profits. **This event is complimentary for Students and Job-Seekers.** Click [here](#) for more info.

The **49th Annual Athol to Orange** [River Rat Race](#) on the Millers River, conducted by the Athol Lions Club in conjunction with the Orange Lions Club, will be taking place on **Saturday, April 14**. The festivities also include a morning parade and ["Big Cheese" 5k run](#). Click [here](#) or send an e-mail to lchauvette@verizon.net for more info.

The **EPA's Watershed Academy** is hosting a free webinar entitled [Using the Clean Water Act State Revolving Fund for Nonpoint Source and National Estuary Projects](#) on **Tuesday, April 17, 2012** from 1:00 PM – 3:00 PM. The Clean Water State Revolving Fund (CWSRF) is a large, flexible, and largely untapped source of funding for watershed protection projects. The CWSRF provides funding each year for traditional stormwater and wastewater projects, as well as for nonpoint source projects, such as land conservation, agricultural best management practices, and clean-up of contaminated sites. Join us to hear more about how you can access the CWSRF for nonpoint source and National Estuary projects. This webcast is part of the EPA's series of webcasts in honor of the [40th anniversary of the Clean Water Act](#). Click [here](#) for more info.

The [Center for Watershed Protection](#) (CWP)'s [Association of Watershed and Stormwater Professionals](#) (AWSP) is hosting a webcast entitled [Build This – Stormwater Retrofit Construction Issues](#) on **Wednesday, April 18, 2012** from 12:00 noon – 2:00 PM. Finding and designing the most promising retrofit projects in a watershed is one thing, but it's quite another to get them constructed properly. This webcast will introduce the chief lessons learned with retrofit construction projects and provide some nifty tools, such as construction checklists for various practices. This webcast will feature nominations for the most horrific retrofit construction disasters as well as shining successes, so this is a great opportunity to let others learn from your experiences!

The [Waquoit Bay National Estuarine Research Reserve](#) is sponsoring a free workshop entitled [Cleaning Up Our Coastal Waters: A Workshop on TMDLs and Managing Nitrogen Pollution](#), on **Wednesday, April 18** from 9:00 AM – 12:30 PM. This workshop is intended to provide local officials, municipal boards, and community members with a solid understanding of nitrogen cycling and pollution budgets (Total Maximum Daily Loads-TMDLs) in the coastal environment. It will provide the background on how human actions are dramatically changing the coastal landscape and why cleaning up our coastal waters is such a big concern. It will delve beyond just explaining how excess nitrogen affects our bays and ponds, to unpacking the nitrogen cycle, sources of nitrogen, how nitrogen moves through watersheds and demonstrating how these issues are inter-related. We will examine why land-based sources of nitrogen need to be controlled and ways to reduce nitrogen loads to coastal ecosystems. Presenters will also address some of the common misconceptions about nitrogen pollution. Participants will learn about TMDLs for water quality, how they are calculated and what they mean for our communities. Click [here](#) to sign up and [here](#) for more info.

EPA's [Office of Environmental Education](#) (OEE) will host three free webinars for educators during [National Environmental Education Week](#) (**April 16-20, 2012**): [Environmental Education for Everyone: EPA's 'K through Grey' Educational Resources](#) (4/17); [Creating the Link Between Emerging Urban and Existing Environmental Education Programs](#) (4/18); and [Greening STEM: Environmental Resources and Tools for Inspiring 21st Century Learning](#) (4/19). The webinars will be part of a kick-off for a new initiative at EPA, called "Environmental Education in Action", that will showcase environmental education programs and resources, including grant projects funded by OEE. Click [here](#) for more info.

John Galluzzo, Adult Education & Citizen Science Coordinator for Mass Audubon's South Shore Sanctuaries, is presenting at least two talks this spring on the theme of his recent book, *Half an Hour a Day Across Massachusetts: Finding Nature in*

Every Town in the Commonwealth. Last year, John proved that a nature walk is never out of reach for any state citizen by taking a half-hour walk in each of the 351 towns in the state, focusing on Mass Audubon Sanctuaries, state parks and other open areas - including cemeteries. Talks will take place on [Thursday, April 19 in Wareham](#) and [Thursday, April 26 in Natick](#). [Click [here](#) to read Galluzzo's similarly-themed blog.]

The [Mass. Department of Conservation and Recreation](#) (DCR)'s annual **Park Serve Day**, taking place on **Saturday, April 21**, will be held at state forests, parks and beaches throughout the Commonwealth. This statewide day of volunteer service helps to get Massachusetts state recreation areas ready for the season. Since 2007, thousands of volunteers have participated in dozens of projects, including picking up litter along ocean beaches, clearing debris from hiking trails, painting benches, and planting trees and flowers at picnic areas. Click [here](#) to see a list of participating parks where you can volunteer and [here](#) to sign up.

The 13th Annual **Charles River Cleanup** will take place on **Saturday, April 21** from 9:00 AM – 12 noon. This event, part of the [National River Cleanup](#) initiative, and coinciding with DCR's **Park Serve Day** (see above), will bring out thousands of volunteers to help to beautify the Charles River and its tributaries. Volunteers will pick up trash and clean the riverbanks at more than 100 sites from Bellingham to Boston. Click [here](#) to sign up or for more info.

Climate Adaptation Training for Local Governments in Southeast Massachusetts is scheduled for **Tuesday, April 24 – Thursday, April 26** at the [Waquoit Bay National Estuarine Research Reserve](#) on Cape Cod. This intensive and highly interactive three-day training course provides individuals with a climate adaptation toolkit to proactively address adaptation planning priorities in the context of local government priorities. Course modules are taught by [NOAA's Coastal Services Center](#) expert training staff and local partners. You will learn about local climate adaptation efforts from expert practitioners working in Massachusetts. Through individual work and group discussions, you will apply what you learn in each module to *your* issue and identify and document steps that your organization can take to effectively integrate climate adaption strategies into policies, plans, and programs. Click [here](#) to sign up or for more info.

Tufts University's Water: Systems, Science, and Society Program (WSSS) and the Massachusetts Water Resources Research Center will hold the third annual ***WSSS Interdisciplinary Water Symposium: The Glass Half Full: Valuing Water in the 21st Century***, at Tufts University in Medford on **Friday, April 27**. Students, academics, and professionals in the greater Boston area and across the nation from the public, private, and non-governmental sectors will explore the various complex and interlinking factors of valuing water throughout developed and developing nations.

October is Archaeology Month! The [Massachusetts Historical Commission](#) MHC is currently accepting event information for its ***2012 Archaeology Month Calendar***. To submit your event, simply [submit the form online](#), or [download the form here](#) and send it via snail mail to the MHC. MHC can also mail a paper form to you. The deadline for submitting an event to be included in the print calendar is **April 27, 2012**. [Click here](#) or look at the [2011 Archaeology Month Calendar](#) for ideas and help on hosting an event.

The [River Management Society](#) (RMS) will be hosting the ***2012 North American River Management Symposium: from intimate creeks to the infinite sea***, from **April 24–26** in Asheville, NC. Click [here](#) for more info.

The ***Friends of the Assabet River National Wildlife Refuge's 2012 Annual Meeting*** is scheduled for **Wednesday, April 25**, beginning at 7:00 PM at the [Assabet River NWR Visitor Center, 680 Hudson Road in Sudbury](#). The featured speaker is Sarah Haggerty of the [Mass. Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program](#) (NH&ESP). Sarah will be presenting a talk entitled ***"BioMap2": Conserving the Biodiversity of Massachusetts in a Changing World***. "BioMap2" is the latest conservation blueprint designed to protect the Commonwealth's biodiversity to meet the challenges of the changing climate. Sarah will describe the process of identifying, mapping and geographically balancing habitats for the creation of Core Habitats and Critical Natural Landscapes across the state. This includes the state's rare species and habitats of conservation concern as described in the Division of Fisheries & Wildlife's [State Wildlife Action Plan](#). With the vernal pool season upon us, Sarah will also describe the **new NH&ESP's new electronic data gathering system for vernal pool data**. [Click [here](#) to access an article by Sarah Haggerty appearing in the [Association of Massachusetts Wetland Scientists](#) (AMWS)'s Spring 2012 newsletter, which explains the [new Vernal Pool & Rare Species Information System electronic data gathering system](#) in more detail.]

The bi-annual [National Prescription Drug Take-Back Day](#) will be taking place on **Saturday, April 28, 2012** at participating police stations and other secure disposal locations (click [here](#) to find a collection site near you – also see info about events organized for [Amherst](#), [Longmeadow](#), [New Bedford](#), [Mattapoisett](#) and [Falmouth](#)). Although the major focus of this initiative is to keep prescription drugs out of the hands of youth and others they were not prescribed for, **a major ancillary benefit of this program is to prevent these medications from contaminating groundwater and surface water supplies and aquatic ecosystems**, which is why [river/watershed advocacy groups also support this program](#). [Click [here](#) to download a useful outreach brochure, [here](#) and [here](#) for more info on the issue of **PPCPs (pharmaceuticals and personal care products)**’s impacts on aquatic ecosystems – see also a [PowerPoint presentation on Endocrine Disrupting Chemicals](#) (originating in PPCPs and otherwise) by Kristin Keteles, Toxicologist, U.S. EPA Region 8, and articles [here](#) and [here](#) for related info .]

The [National Water Monitoring Conference](#) (NWQMC) will take place from **April 30 to May 4** in Portland, OR. This national forum provides an exceptional opportunity for federal, state, local, tribal, volunteer, academic, private, and other water stakeholders to exchange information and technology related to water monitoring, assessment, research, protection, restoration, and management, as well as to develop new skills and professional networks. The NWQMC conference and **River Network’s National River Rally** (see below) are coordinating an overlap day (May 4th) with themes and presentations geared toward fostering improved collaboration between government and nonprofit groups working together for clean water. Click [here](#) for more info.

[River Rally 2012](#), co-sponsored by [River Network](#) and the [Waterkeeper Alliance](#), will be taking place from **May 4 – May 7** in Portland, OR. A major theme for this year’s Rally is the **40th Anniversary of the federal Clean Water Act**, and a plenary panel and a number of workshop sessions will be on that topic. Click [here](#) to download the brochure and [here](#) to read an article by [River Network’s President Todd Ambs](#) entitled [Forty Thoughts For Forty Years - The Clean Water Act Four Decades Later](#).

The [5th Biennial Water For People Gala](#), co-hosted by the [New England Water Environment Association](#) (NEWEA) and the [New England Water Works Association](#) (NEWWA), will take place on **Saturday, May 5, 2012** at the New England Aquarium in Boston. Please join us for a night of music, dancing, speakers, and fun. Although Cinco de Mayo is a Mexican holiday, we have a lot to celebrate and even more to support in the 11 countries that [Water For People](#) now operates in. Write to David VanHoven (vanhovendi@bv.com) or Katie Chamberlain (katie.chamberlain@ch2m.com) for more info.

[Earth Night](#), a party to benefit the [Environmental League of Massachusetts](#), is Boston’s largest environmental gala, drawing hundreds of the state’s business, environmental, and community leaders. Over the past 16 years, Earth Night has featured award-winning food, music, networking with the state’s environmental and political leadership, an awards ceremony and exciting live and silent auctions. The event also includes an “Earth air,” a mix of interactive exhibits from an assortment of environmentally-oriented companies and organizations. This year’s Earth Night takes place on **Saturday, May 5** from 8:00 PM -11:00 PM at the [Back Bay Events Center](#), 180 Berkeley Street, Boston. Click [here](#) to sign up or for more info.

[ESRI](#), developer of GIS (geographic information system) software, has recently launched [ArcGIS.com](#), **a free web based tool for creating web maps and mapping applications**. It allows a user to create customizable maps with built in functions including the ability to: connect to a wide variety of base maps and mapping services, import existing GIS data, customize how information is displayed, edit data using a simple interface or smartphone, collaborate with others, create online galleries of web maps, establish public or private map groups, add new data, and more. The free webinar [ArcGIS.com: A User-Friendly Tool for Creating Maps Online](#), scheduled for **Tuesday, May 8, 2012** from 2:00 PM-3:00 PM, will provide an overview of this new mapping tool. Many of the functions listed above will be covered through discussion and live demonstration and will include examples of how towns and land trusts might use the technology to meet their online mapping needs. Click [here](#) for more info and [here](#) to register.

At the workshop [Better Together: Partnering for Effective Land Conservation and Management](#), scheduled to take place on **Thursday, May 10** from 9:30 AM – 4:00 PM at the [Doyle Center](#) in Leominster, trainers from the [Consensus Building Institute](#) will teach relevant strategies and best practices for managing and engaging in successful partnerships, based on real-life examples, situations and experiences. Participants will gain an understanding of, and framework for, when to partner and with whom; negotiating objectives and strategies; clarifying roles and responsibilities; and preventing surprises and setbacks from derailing the partnership and effort. The workshop will include lectures, group discussions, and interactive activities designed to provide participants with a framework for effective partnering. The registration **deadline** is **May 1**; click [here](#) for more info.

[Ioby](#) (rhymes with Nairobi, stands for "in our backyards") is an online fundraising tool for environmental leaders. For the last two years, more than 130 projects in NYC have been fully funded using ioby.org. Now ioby is branching out and will support any environmental project from across the country, whether you want to raise \$300 or \$30,000, for a new farm market, a safer bike lane, a play street or a stream restoration. ioby can help you have a successful fundraising campaign and build support on major social media channels. [Community Matters](#) is sponsoring [Green Up: Local Environmental Action](#), a conference call on **Thursday, May 10** beginning at 4:00 PM to learn more about this social networking tool to raise money for environmental projects. Click [here](#) to register and [here](#) for more info.

In conjunction with its new exhibition, [Mollusks: Shelled Masters of the Marine Realm](#), the [Harvard Museum of Natural History](#) will host a screening of the new documentary film [Shellshocked: Saving Oysters to Save Ourselves](#) on **Saturday, May 12** at 2:00 PM. *Shellshocked* follows efforts to prevent the extinction of wild oyster reefs, which keep oceans healthy by filtering water and engineering ecosystems. Due to overfishing and pollution, much of the world's wild oyster reefs have been declared "functionally extinct." The screening will be followed by a Q&A with the [filmmaker Emily Driscoll](#) and George Buckley of the [Sustainability and Environmental Management Program at Harvard Extension School](#). The movie is free but admission to the Museum is \$9 for non-members. Click [here](#) and [here](#) for more info.

The [New England Interstate Water Pollution Control Commission](#) (NEIWPCC) will be hosting its [23rd Annual Nonpoint Source Pollution Conference](#) from **May 15-16, 2012** in Portsmouth, NH. Topics expected to be covered include successful watershed-based plan implementation (case studies), fluvial geomorphology and pollutant loading, legal barriers to low impact development – identification and fixes, social marketing to affect changes in behavior – what works and what does not, and pollutant transport and fate and their roles in designing successful NPS projects. Contact Clair Ryan at cryan@neiwpcc.org for more info.

[Mass Audubon's Long Pasture Wildlife Sanctuary](#) is hosting [A Hands-On Wetland Creation Workshop for Professionals](#) course from **May 22-24, 2012** at the Sanctuary, 345 Bone Hill Rd. Barnstable, MA. The course is organized by Mass Audubon and the [Center for Wetlands and Stream Restoration](#) in collaboration with [Partners in Amphibian and Reptile Conservation](#) (PARC), the [USDA Natural Resources Conservation Service](#) (NRCS) and The U.S. Fish and Wildlife Service's [Partners for Fish and Wildlife Program](#). The workshop is designed for individuals interested in learning how to use practical, low cost techniques for building wetlands for wildlife. Participants will see how wetland projects can be planned in forested and open areas, on vast expanses of public land, and even on school grounds. Attendees will discover how to select the best locations for building wetlands, test soils, choose construction techniques, work with heavy equipment operators, and establish native plants. Presentations will describe current conservation efforts using reintroduction, translocation, and habitat creation techniques and introduce [Eastern spadefoot toad conservation efforts](#) on Cape Cod. Intended participants include biologists, foresters, hydrologists, engineers, technicians, educators, land trusts, and other non-profit and environmental professionals. Click [here](#) or contact Ian Ives [(508) 362-7475 ext. 9350, iives@massaudubon.org] for more info.

The environmental education program [Project WET](#) will be holding its [National Conference: Water Education – Developing 21st Century Solutions](#), at [Bridgewater State University](#) from **May 23-25, 2012**. The goal of the conference is to increase the knowledge and capacity of conference participants to effectively reach children, parents, educators and communities of the world with water education. In the interest of innovation, engaging and interactive presentations are encouraged. Presentations will fall into four basic topic areas: Science, Technology, Engineering & Math (STEM) in Water Education; Pedagogy & Water Education; ActionEducation™ & Water Education; and Technology. Click [here](#) to register or for more info.

A course entitled [Inland Wetland Plant Identification](#) is scheduled to take place on **Thursday, May 24, 2012** from 9:00 AM – 3:30 PM at UMass/Amherst. The course begins with an overview of the major characteristics of woody and non-woody vegetation used for identification in most plant keys. Guided exercises will be used in a classroom/laboratory setting to practice keying out plant specimens collected from local wetland sources. An afternoon field trip to a local wetland will allow opportunity to practice identification skills in a natural setting. Related topics such as plant adaptations to wetland hydrology and the concept of "hydrophytic" vegetation will also be discussed. Click [here](#) to sign up or for more info.

The 6th annual [Yale Conservation Finance Camp](#) will be held at Yale University on **Monday, June 4 through Friday, June 8, 2012**. The course offers the latest information on a wide range of innovative conservation finance tools, including new sources of philanthropic funds, public capital and private investment, as well as a framework for analyzing and packaging them. The camp is focused on useful, hands-on tools for conservation practitioners and board members, foundation leaders,

private investors and graduate students. This highly interactive course is limited to 20 participants. **Registration is on a first-come-first-served basis.** For further information please contact Amy Badner at amy.badner@yale.edu.

The [2nd National Conference on Engineering& Ecohydrology for Fish Passage](#) (aka *Fish Passage 2012*) will be taking place from **June 5-7, 2012** at UMass/Amherst. The conference should be of interest to researchers, educators, practitioners, funders, and regulators who have an interest in advancements in technical fishways, nature-like fishways, stream restoration and stabilization, dam removal, road ecology, and the myriad of funding, safety, climate change, and other social issues surrounding connectivity projects. The conference will have concurrent sessions in engineering, biology, and management and social issues as well as plenary talks, professional networking opportunities, and a poster session. Click [here](#) to register or for more info.

A free presentation entitled [The Rare Plants of Massachusetts](#) will be taking place on **Wednesday, June 6** from 7:00 PM to 8:30 PM at the [Cambridge Public Library](#). The event is sponsored by [Grow Native Massachusetts](#) as part of its [Evenings with Experts](#) series. From its calcareous cobbles to its coastal plains, Massachusetts has a broad diversity of ecoregions and is home to 1,814 species of native plants. Of these, 254 (or 14%) are vulnerable to extinction and protected by the Massachusetts Endangered Species Act. Even more native plants are categorized as species of conservation concern. Speaker and Massachusetts' State Botanist Bryan Connolly, employed by the [Mass. Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program](#), will present an overview of these many vulnerable plants and the threats they face—from habitat destruction to invasive plants to climate change.

The [Center for Watershed Protection](#) (CWP)'s [Association of Watershed and Stormwater Professionals](#) (AWSP) is hosting a webcast entitled [Stream Restoration: Implementation You Can Take to the BANK](#) on **Wednesday, June 20, 2012** from 12:00 noon – 2:00 PM. This webcast will build on the 2011 CWP/AWSP webcast, [Stream Restoration: Between a Rock and a Hard Place](#) to go one step further and focus on the assessment methods to identify appropriate sites for restoration and the design approach used to meet the restoration goals and objectives. Stream restoration can serve as a major tool for managers to comply with regulations and meet their pollution reduction goals. Several important factors for success will be discussed that include targeting the right restoration site, deciding what assessments to do, determining the appropriate design needed, and carrying out the assessments that can tell us how the restoration did or did not meet the original project goals and objectives. This webcast will host experts in the field to share their experience, data, case studies to highlight common pitfalls and solutions in the stream restoration field, and the most up-to-date stream restoration credit information.

The [American Water Resources Association](#) (AWRA) is hosting two conferences back-to-back: [Contaminants of Emerging Concern in Water Resources II: Research, Engineering, and Community Action](#) and [Riparian Ecosystems IV: Advancing Science, Economics and Policy](#). These conferences will be held in Denver, CO on **June 25-27** and **June 27-29** respectively. Click [here](#) for more info.

On-line Resources

The **U.S. EPA's Office of Water** recently announced the release of its new [Green Infrastructure website](#) to better communicate the “what, why, and how” of green infrastructure to municipalities, developers, and the general public, as well as [what the agency is doing to support further use of the tool](#). Green infrastructure uses vegetation, soils and natural processes to manage water and create healthier urban environments. The site offers a wealth of publications and tools developed by EPA, state and local governments, the private sector, nonprofit organizations, and academic institutions. The new green infrastructure website emphasizes the multiple environmental, social, and economic benefits associated with green infrastructure. The new site also provides access to the latest research developed by [EPA's Office of Research and Development](#).

The EPA recently announced the release of a **new online tool that provides the public with important information about pollutants that are released into local waterways**. The [Discharge Monitoring Report Pollutant Loading Tool](#) brings together millions of records and allows for easy searching and mapping of water pollution by local area, watershed, company, industry sector and pollutant. The public can use this new tool to protect their health and the health of their communities. Searches using the pollutant loading tool result in “top 10” lists to help users easily identify facilities and industries that are discharging the most pollution and impacted waterbodies. When discharges are above permitted levels, users can view the violations and link to details about enforcement actions that EPA and states have taken to address these violations.

Nutrient pollution is one of America's most widespread, costly and challenging environmental problems, and is caused by excess nitrogen and phosphorus in the air and water. In response, **the EPA recently unveiled a [new website on nutrient pollution policy and data](#)** to help individuals access information on EPA actions to reduce nutrient pollution, state efforts to develop numeric nutrient criteria, and EPA tools, data, research, and reports related to nutrient pollution. The site features information explaining the problem of nutrient pollution; the sources of the pollution; how it affects the environment, economy, and public health; and what people can do to reduce the problem. The site also features an interactive map of local case studies in reducing nutrient pollution. Click [here](#) or contact Allison Gold at (202) 566-1010 or gold.allison@epa.gov for more info.

The EPA recently released a new technical document entitled **[Identifying and Protecting Healthy Watersheds: Concepts, Assessments, and Management Approaches](#)**. This document provides state water quality and aquatic resource scientists and managers with an overview of the key concepts behind the EPA's **[Healthy Watersheds Initiative](#)** (HWI). The HWI is intended to **preserve and maintain natural ecosystems by protecting our remaining healthy watersheds, preventing them from becoming impaired and accelerating our restoration successes**. The HWI encourages states to take a strategic, systems approach to protecting healthy watersheds and preventing future water quality impairments. *Identifying and Protecting Healthy Watersheds* provides examples of approaches for assessing components of healthy watersheds, integrated assessment options for identifying healthy watersheds, examples of management approaches and assessment tools and sources of data. Click [here](#) for more info.

Newly-available on the EPA website is an archived version of the February 22, 2012 webcast **[Recovery Potential Screening: A Tool for Comparing Impaired Waters Restorability](#)**. The two presenters were Douglas Norton [(202) 566-1221], Environmental Scientist, Watershed Branch, U.S. EPA's Office of Wetlands, Oceans and Watersheds, and Tatyana DiMascio, ORISE Fellow, Watershed Branch, U.S. EPA's Office of Wetlands, Oceans and Watersheds. This webinar was intended to help states, watershed groups and others become acquainted with the **new [Recovery Potential Screening](#) website** and methodology for analyzing and comparing restorability differences among watersheds. The website provides step-by-step screening directions, time-saving tools for calculating indices and displaying results, summaries of over 120 ecological, stressor and social indicators, a recovery literature database, and several case studies. [Click [here](#) or [here](#) for access to other archived EPA webcasts.]

The EPA is currently (with the help of contractor MDB, Inc.) seeking to update the **listing of river, watershed and related environmental groups** in its **[“Adopt Your Watershed”](#)** database. They recently send out a reminder to **[all the organizations already registered in the database](#)** to periodically check and update their records. Groups not in the database can **[fill in this form](#)** to be added to it. If you need assistance in adding or updating your organization's info, contact Mike Masnik, a contractor in EPA's Water Resources Center, at (202) 566-1731 or masnik.michael@epa.gov. Any other questions can be directed to Patricia Scott in EPA's Office of Wetlands, Oceans and Watersheds at scott.patricia@epa.gov.

In collaboration with state agencies, universities, watershed groups, and other organizations, **EPA Region 1/New England's** recently-launched **[Soak Up The Rain](#)** web page was established to spur citizens, businesses and communities to take action to better manage stormwater runoff. It's a call to action “to all of us who care about clean water, who want to reduce flooding, who want to create healthier and more beautiful communities”. The website is replete with examples where fellow New Englanders have installed **[rain barrels](#)**, disconnected **[downspouts](#)**, established **[rain gardens](#)**, planted **[trees](#)**, and utilized **[permeable pavements](#)**, **[dry wells](#)** and **[green roofs](#)** to help soak up the rain. The web page also encourages anyone taking action to share photos and stories of what you have done. **[Soak Up The Rain](#)** will be the focus of a **[workshop taking place on April 12](#)** (see *Calendar* section of this newsletter for details). [Click [here](#) to view maps indicating water quality status by town as well as impervious cover and MS4 coverage for stormwater permitting].

The **[River Restoration Analysis Tool](#)** (RiverRAT), developed by a **[team effort](#)** sponsored by **[NOAA Fisheries](#)** and the **[U.S. Fish and Wildlife Service](#)**, is a science-based tool for **analyzing proposed stream engineering, management, and restoration projects on riverine habitat**. The tool is supported by a source document that provides a comprehensive synthesis of the watershed and river sciences relevant to restoration planning and design, a project risk evaluation matrix, and a separate comprehensive checklist of information necessary to review project proposals. The RiverRAT tool will walk you through a series of 16 questions that parallel the phases of restoration project development. Each question is designed to help you evaluate whether a project has addressed fundamental considerations at each step of the project development process. Resources at the RiverRAT page include the newly-posted document **[Science Base And Tools For Analyzing Stream Engineering, Management, And Restoration Proposals](#)** (NOAA Technical Memorandum NMFS-NWFSC-112).

Access to **aquatic bioassessment data (biological community and physical habitat data)** collected by U.S. Geological Survey (USGS) scientists from stream ecosystems across the nation is now available through the USGS's new [BioData online retrieval system](#). Fish, aquatic macroinvertebrate, and algal community samples are collected and stream physical habitat surveys are conducted as part of the USGS's mission to describe and understand the Earth. Data from over 15,000 fish, aquatic macroinvertebrate, and algae community samples are now freely accessible online, as are over 5,000 physical habitat data sets that were collected to support the community sample analyses. Scientists, resource managers, teachers, and the general public can retrieve data using an online query. BioData Retrieval allows one to find the data of interest based on criteria (filters) such as data type, location, date, or taxonomy. Selected retrieval criteria can be saved to a computer desktop for future queries. Click [here](#) or contact Pete Ruhl [pmruhl@usgs.gov, (703) 648-6841] or Mitch Harris [maharris@usgs.gov, (217) 328-9716] for more info.

The [Mass. Department of Conservation and Recreation](#) (DCR)'s [Office of Dam Safety](#) recently updated their online database of information on the more than 3,000 dams in the Commonwealth. The recent update shows accurate point locations for the dams, along with other attributes (dam name, dam function, etc.) This info is accessible via the [Massachusetts Dams data layer](#) maintained by [MassGIS](#), and may also be viewed in [OLIVER](#) under Available Datalayers: Infrastructure.

Mass. DCR's [Heritage Landscape Inventory Program](#) seeks to identify the locations of Heritage landscapes, those special places and spaces that help define the character of the Commonwealth's communities. They are the result of human interaction with the natural resources of an area, which influence the use and development of land. These geographic areas contain both natural and cultural resources. This program has posted on line [reconnaissance reports and maps describing and documenting the location of heritage landscape features](#) for many of the Commonwealth's regions and communities.

Mass. DCR's [Greenways and Trails Program](#)'s web page is the place you can sign up for or read archived versions of [Connections](#), the Program's monthly electronic newsletter. See, for example, the [March 2012 issue, about the Connecticut Watershed Blueway](#), and the [January 2012 issue, reporting on the statewide trails conference that took place last fall](#). Among the resources available at the [Publications](#) page are downloadable versions of the presentations made at last fall's conference as well as the recently-updated [Department of Conservation and Recreation Trails Guidelines and Best Practices Manual](#).

The March 28, 2012 edition of [Massachusetts Bay Window](#), the newsletter of the [Massachusetts Bays Program](#) (MBP), contains an article on the 2012 MBP Research and Planning Grant awardees, the update of the MBP's Comprehensive Conservation and Management Plan (CCMP), "king" tides, a Great Marsh Revitalization Task Force update, articles about [Salem Sound Coastwatch](#)'s new interactive online [Salem Sound to Boston Kayaking Guide](#) and the Boston Harbor Habitat Atlas, and more. Click [here](#) to read the newsletter.

Non-Government On-line Resources *(in rough alphabetical order – the following are offered for information purposes only and are not an endorsement of the items listed below)*

Association of State Wetland Managers (ASWM)

<http://www.aswm.org>

ASWM is a nonprofit, Maine/NY-based membership organization established in 1983 to promote and enhance protection and management of wetland resources, to promote application of sound science to wetland management efforts and to provide training and education for its members and the public. Resources at the ASWM web page include info on [recently published and forthcoming books on wetland science and ecology](#), ASWM's monthly "[Wetland Breaking News](#)" newsletter and the "[Compleat Wetlander](#)" blog, and a downloadable copy of a [recently completed report](#) entitled [Assessing the Natural and Beneficial Functions of Floodplains: Issues and Approaches; Future Directions](#).

Bird's Eye View

http://en.wikipedia.org/wiki/Bing_Maps#Bird.27s-eye_view

One of the utilities offered as part of Microsoft's [Bing Maps](#) tool, the [Bird's-eye view](#) displays aerial imagery captured from low-flying aircraft. Unlike the top-down aerial view captured by satellite, Bird's-eye images are taken at an oblique, 45-degree angle, which give the user better depth perception for buildings and geography. Bird's-Eye images for a location may be viewed from all four cardinal directions. These images are typically much more detailed than the aerial views taken from

directly above. Simply type in a location in the [Bing Maps](#) search bar, then select “Birds Eye” from the map options. Use the orientation tools to zoom in to an area of interest and the rotate tool to see the view from four different angles.

Center for Wetlands and Stream Restoration

<http://www.wetlandsandstreamrestoration.org>

The KY-based group is a partnership of agencies, organizations, and businesses working together to restore wetlands and streams, improve techniques for their restoration, and train individuals how they can bring back these ecosystems. Resources at this page include a [list and description of useful publications](#), [restoration project photo albums](#), and upcoming [training opportunities](#).

Conservation Assessment and Prioritization System (CAPS)

<http://www.umasscaps.org>

Developed by [UMass/Amherst's Landscape Ecology Program](#), CAPS is a computer software program and approach for assessing the ecological integrity of lands and waters and subsequently identifying and prioritizing land for habitat and biodiversity conservation. Results from this assessment are now available in four formats:

- [“important habitat” maps for each city and town, depicting Integrated Index of Ecological Integrity \(IEI\) scores](#);
- Maps depicting “Habitat of Potential Regional and Statewide Importance” as defined in MassDEP’s [Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands](#);
- Geo-referenced TIFF files for download and use with image viewers, web browsers or GIS software; and
- Arc grids available for download and use with GIS software. Click [here](#) or contact Scott Jackson at sjackson@umext.umass.edu or (413) 545-4743 for more info about CAPS.

Designing Healthy Communities

<http://designinghealthycommunities.org>

Almost everything in our built environment is the way it is because someone designed it that way. The goal of the Designing Healthy Communities website is to offer best practice models to improve our nation’s public health by re-designing and restoring our built environment. Resources at this page include info about the [four-part “Designing Healthy Communities” series of videos](#), hosted by UCLA School of Public Health Professor [Dr. Richard Jackson](#), recently aired on [many PBS TV stations](#), as well as the [companion book](#) to the TV series. [Click [here](#) to see an interview of Dr. Jackson on the Tavis Smiley program, and [here](#) to download presentations made at the *Creating Healthy, Safe and Livable Communities: Bridging the Gap Between Public Health and Community Development* workshop held in Peabody this past January.]

Connecticut River Web Page

<http://connecticutriver.us>

This web page was established by the [Pioneer Valley Planning Commission](#) to provide Pioneer Valley residents and visitors with timely and helpful information about the Connecticut River and its tributaries, including information about river access points for recreation, [current water quality](#), [recreational trails in the watershed](#), [studies and research](#) relating to the Connecticut River and news about efforts to clean up and improve the Connecticut River. Resources include an [interactive GIS map viewer](#) to help find riverine parks, trails and access points and a set of [“CSO” \(combined sewer overflow\) fact sheets](#).

Go Botany

<http://gobotany.newfs.org>

Recently launched by the [New England Wild Flower Society](#) (NEWFS), the Go Botany web tool represents the cutting edge in plant identification for our region and beyond. Its innovative [Plant Identifier](#) technology may be used to **identify more than 1200 of the most common native and naturalized plant species in New England**. Other interactive features such as teaching tools, dichotomous keys, and collaborative social-networking applications will to come on-line shortly. [NEWFS is offering two **free Go Botany training sessions** on **April 15** and **April 24**; click [here](#) and [here](#) for more info.]

Guidestar

<http://www.guidestar.org>

This website should be of great value to nonprofit organizations, both in helping to **find sources of funding**, as well as **enhancing the ability of potential funders to learn about your group and its good work** (e.g. several [donor-advised funds](#), a growing sector of philanthropy, utilize and/or recommend Guidestar to their clients for researching potential recipient organizations). One of Guidestar's fee-based services is [Guidestar Exchange](#), designed to connect nonprofits with current and potential supporters (current participants in this program include the [Charles River Watershed Association](#), the [Merrimack River Watershed Council](#), the [Mount Grace Land Conservation Trust](#) and the [Urban Ecology Institute](#)). Many of Guidestar's other features are available at no cost, including an opportunity to [submit reviews on nonprofit organizations you are familiar with](#), and an [archive of articles](#) on fundraising and other issues of importance to nonprofit organizations (see, e.g., the recently-posted articles on [board member recruitment resources](#), [board member roles and responsibilities](#), "[Resources to Help Engage Your Board in Fundraising](#)" and "[Three Fundraising Habits of Supremely Successful Boards](#)"). [See also the archived Guidestar webinar on from 2/1/12 entitled *Fire Up Your Board for Fundraising: Turn Their Passion into Action* ([view the live recording](#) or [view the presentation](#))].

MapsOnline

<http://www.mapsonline.net>

A product of the Arlington, MA-based company [PeopleGIS](#), MapsOnline enables cities and towns to share their municipal GIS databases with the general public. Over two dozen Mass. cities and towns (see the [list](#)) are already using this service. These local databases typically show parcel lines and can be queried for parcel ownership and other assessors-type data, and different coverages (like a zoning district or protected open space data layer) can be selected for display. [See the [parcel map data layer](#) and other [MassGIS](#) data layers for info in communities not enrolled in the MapsOnline system.]

Patagonia Music Collective's Benefit Tracks

<http://www.patagonia.com/us/media/music/benefit-tracks>

The outdoor gear company [Patagonia](#) has partnered with a diverse group of musicians to raise money for non-profit environmental groups through the sale of exclusive "benefit tracks". These include *Life of a Ripple* by Esperanza Spaulding, benefitting the [Trust for Public Land](#), and *Come to Me* by [Laura Jansen](#), benefitting the [Friends of the Los Angeles River](#). You can also access outdoor-themed [blog postings](#) and podcasts such as "[Earth Juice](#)", in which wildlife biologist [Douglas H. Chadwick](#) discusses the importance of freshwater for life on planet Earth, and serves as an introduction to Patagonia's "[Our Common Waters](#)" environmental campaign.

Philanthropy News Digest (PND)

<http://foundationcenter.org/pnd>

PND, a free service of the [Foundation Center](#), compiles philanthropy-related articles and features culled from print and electronic media outlets nationwide. PND also publishes a daily listing of [RFPs \(Request for Proposals\)](#), a brief overview of current funding opportunities offered by foundations or other grantmaking organizations. PND's [Jobs board](#) features current full-time job openings at U.S. foundations, grantmaking public charities, and nonprofit organizations. PND also notes interesting web pages (see, e.g., the recent posting about the [World Water Day](#) website) and book reviews (see, e.g., the recent review of [How to Raise \\$500 to \\$5000 From Almost Anyone; The Board Member's Easier Than You Think Guide to Nonprofit Finances](#)).

Preservation and Land Conservation – Saving America's Natural and Cultural Legacy

<http://www.preservationnation.org/information-center/saving-a-place/land-conservation>

When a place has significant cultural importance, the historic preservation movement stands ready to protect it. Many of us are also members of land conservation organizations that work to protect places of profound natural, agricultural, or open space value. But what about special places that boast a range of values? These places – often defined as [cultural landscapes](#) – are more than the sum of their parts. Loss of one dimension diminishes our experience of the whole place. Yet these complex sites can present challenges for organizations and resources structured to address solely historic preservation or land protection. The National Trust for Historic Preservation and the Land Trust Alliance collaborated on this Preservation and Land Conservation web page to provide information, inspiration, and assistance to promote comprehensive protection of all the elements that make places special.

Program on Conservation Innovation (PCI)

<http://www.conservationinnovation.com>

Directed by [James N. \(“Jim”\) Levitt](#) and a program of the [Harvard Forest](#), PCI’s mission “is to build knowledge about highly effective conservation science, education, governance, protection, and stewardship practices and to communicate that knowledge to conservation practitioners, decision makers, and citizens in the United States as well as across the globe”. Resources at the PCI web page include the quarterly [Conservation Innovation Update](#) newsletter and a downloadable copy of the recently-issued [Report of The Massachusetts Commission on Financing Forest Conservation](#). [Click [here](#) for a press release, [here](#) for an article on and [here](#) for a summary of the Mass. Forest Financing report; see also [A Policy Agenda for Conserving New England’s Forests - Priorities for 2013](#).]

River Network’s Organizational Status Report Survey

<http://www.rivernetwork.org/status-report-survey>

This on-line survey is designed to assess the programmatic and organizational capacities of your organization. It also collects opinions and perceptions from people within your organization. This data will help you and your organization determine its organizational and programmatic needs. Although the survey is oriented to watershed associations and similar groups, it may be useful for other entities working on river/watershed issues too (government agencies, universities, etc.) You are encouraged to first read the [Frequently Asked Questions page](#) to help determine if completing this survey would be useful to your organization, and the [list of the organizational information requested in the survey](#) so you know in advance what is needed before you begin to fill out the online form. Contact Mary Ellen Olcese at (410) 745-3053 or meolcese@rivernetwork.org if you have questions.

Root for Your River

http://www.ctriver.org/programs/outreach_education/root_for_your_river/index.html

In 2011, the Connecticut River watershed was impacted by three separate weather events: tornadoes in June; Tropical Storm Irene and its associated flooding in August; and an historic snow storm in October. Each of these weather events had one thing in common: significant tree loss across the Connecticut River watershed. To address the widespread tree loss, the [Connecticut River Watershed Council](#) partnered with [New England Public Radio](#) (WFCR & WNNZ) on the “[Root for Your River](#)” Campaign, designed to help with replanting efforts throughout the Connecticut River watershed. Working together, CRWC and New England Public Radio are mobilizing organizations and volunteers to plant up to 2,600 trees throughout the Connecticut River Valley. Many of the trees are native species supplied by the New England Wild Flower Society’s [Nasami Farm](#) in Whately, MA (click [here](#) to read more). [Click [here](#) to read about [The Nature Conservancy](#)’s ongoing effort to replant American Elms within the floodplains of the Connecticut River.]

SignOn.org

<http://www.signon.org>

SignOn is a free service that allows anyone to set up their own online petition, share it with friends, and stay in touch with the signers of their petition using email (see, e.g., the petition regarding the [Mass. Bottle Bill](#)). The web page (still in “beta” version) offers helpful info on [how to find people to sign your petition](#), [taking your campaign to the next level](#), [how to promote your petition on Twitter](#), [communicating with decision-makers](#), and [delivering your petition](#) to the intended recipient(s). Click [here](#) for more info.

Taking Action for Wildlife

<http://extension.unh.edu/FWT/tafw/index.htm>

While this web page, the product of a collaboration between [NH Fish and Game](#) and [UNH Cooperative Extension](#), is intended to [assist New Hampshire communities and landowners in conserving wildlife and habitats](#), many of the resources provided there should be of value in Massachusetts as well. See, for example, the [Habitat brochures series](#) and [promotional flyer](#), especially the info on **headwater streams** (both the [web](#) and [.pdf](#) versions) and **floodplain forests** (both the [web](#) and [.pdf](#) versions). Click [here](#) for additional resources on this topic.

Trees, Paddlers and Wildlife: Safeguarding Ecological and Recreational Values on the River

<http://www.outdoors.org/rivers>

Created two years ago and resulting from a collaboration between Russ Cohen of the DER and Mike Gildesgame of the [Appalachian Mountain Club](#), the purpose of the *Trees, Paddlers and Wildlife* web page is to educate paddlers and others about why trees are good for riverine organisms and habitats and to encourage their retention except where significant safety hazards exist, and even then to look for the minimum action possible (e.g., judicious pruning or relocation of the vegetation rather than complete removal) to abate the hazard. Recently joining the *Trees, Paddlers and Wildlife* [brochure](#) and [video](#) on this page is the **newly-posted PowerPoint presentation** Russ delivered on this topic at the [Mass. Association of Conservation Commission's 2012 Annual Environmental Conference](#),

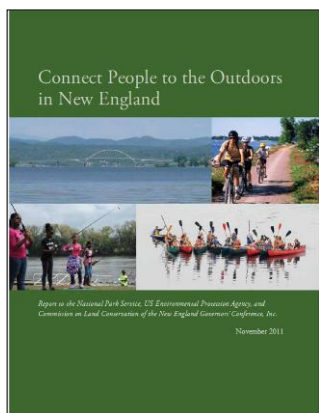
Troutnut.com

<http://www.troutnut.com>

Set up and maintained by [Jason Neuswanger](#), Troutnut.com is a [photographic shrine to trout](#), fly fishing, [beautiful rivers](#), the [fascinating flies we imitate](#), and how to match the hatch for every common species in North America. Resources at this site include [Aquatic Insects of our Trout Streams](#), with nice photos and description of the bugs trout like to eat.

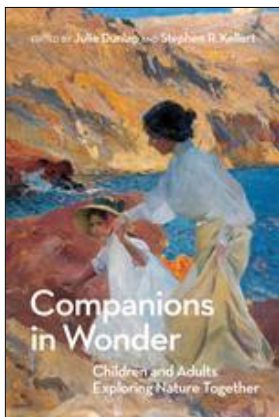
Publications, Videos, etc.

(the following are offered for information purposes only and are not an endorsement of the items listed below.)

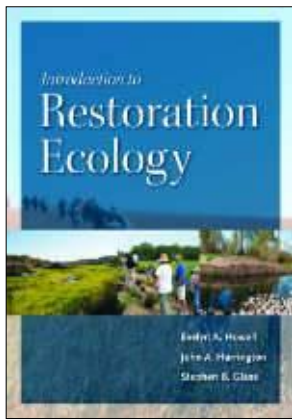


In its [report of July 2010](#), the [Blue Ribbon Commission on Land Conservation](#) (CLC) of the [New England Governors' Conference, Inc.](#) (NEGEC) recommended pursuit of five related, New England-wide initiatives, including one to [Connect People to the Outdoors](#). The governors endorsed five specific objectives for this initiative: (1) Provide employment opportunities in the outdoors through the creation of a regional partnership with third-sector programs organized and promoted by New England's many youth and adult conservation and education organizations; (2) Explore opportunities to develop community and urban gardens, serving as both a source of food as well as creating educational opportunities; (3) Help communities along eight priority regional corridors (including the **Connecticut, Merrimack and Blackstone Rivers** and the **East Coast Greenway**) to develop a wide range of recreational opportunities. (4) Collaborate in development of programs that introduce the public to outdoors and generate awareness and greater interest in the natural sciences; and (5) Provide opportunities, primarily through recreation, agricultural endeavors, and education that will contribute to healthy lifestyles

for Americans. These recommendations are covered in a NEGEC report issued late last year entitled [Connect People to the Outdoors of New England](#). Click [here](#) or [here](#) for more info and [here](#) to download a copy of the report.

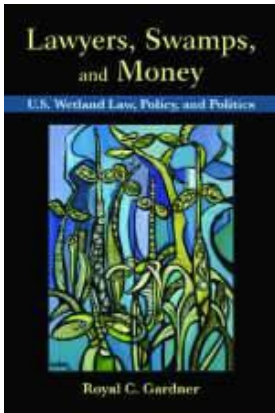


Rachel Carson's classic 1956 essay [Help Your Child to Wonder](#) urged adults to help children experience the "sense of wonder" that comes only from a relationship with nature. Today, a growing number of environmentally minded parents, teachers, and other adults are seeking to restore nature to its rightful place in children's lives. The new anthology [Companions in Wonder: Children and Adults Exploring Nature Together](#), published by [MIT Press](#) and edited by [Julie Dunlap](#) and [Stephen R. Kellert](#), gathers personal essays recounting adventures great and small with children in the natural world. The authors--writing as parents, teachers, mentors, and former children--describe experiences that range from bird watching to an encounter with an apple butter-loving grizzly bear. Rick Bass captures fireflies with his children and reflects on fatherhood; Michael Branch observes wryly that both gardening and parenting are "disciplines of sustainability"; Lauret Savoy wonders how African American children can connect to the land after generations of estrangement; and Sandra Steingraber has "the big talk" with her children, not about sex but about global warming. By turns lyrical, comic, and earnest, these writings guide us to closer connections with nature and with the children in our lives, for the good of the planet and our own spiritual and physical well-being. Click [here](#) to order the book or for more info.



Restoration ecology is a young field that integrates theory and knowledge from a range of disciplines, including the biological, physical, and social sciences as well as the humanities. [Introduction to Restoration Ecology](#), a recent addition to Island Press' [The Science and Practice of Ecological Restoration](#) book series, offers a real-life introduction to the field and an interdisciplinary overview of the theory behind it. Developed by ecologists and landscape architects, each of whom

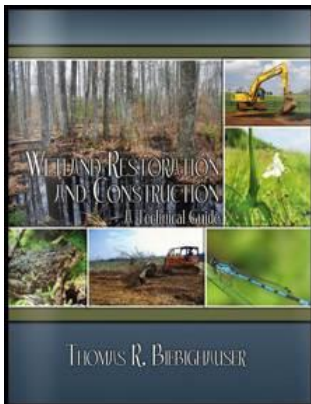
has been involved in restoration research and practice for many years, the focus of the book is on providing a framework that can be used to guide restoration decisions anywhere on the globe, both now and in the future. The text is organized around a restoration process that has been tested and revised by the authors in their restoration ecology courses taught at the University of Wisconsin-Madison over the past thirty years.



Also published by Island Press, [*Lawyers, Swamps, and Money*](#), by prominent legal scholar and wetlands expert [Professor Royal C. Gardner](#), is an accessible, engaging guide to the complex set of laws governing America's wetlands. After explaining the importance of these critical natural areas, the book examines the evolution of federal law, principally the Clean Water Act, designed to protect them. Topics covered in the book include:

- the curious relationship between the U.S. Army Corps of Engineers and the Environmental Protection Agency
- the goal of “no net loss” of wetlands
- the role of entrepreneurial wetland mitigation banking
- the tension between wetland mitigation bankers and in-lieu fee mitigation programs; and
- wetland regulation and private property rights.

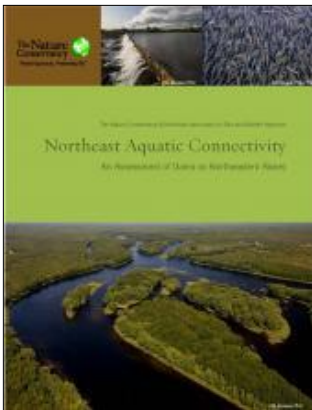
The book concludes with insightful policy recommendations to make wetlands law less ambiguous and more effective. Gardner describes landmark cases and key statutes with uncommon clarity and even humor. Students of environmental law and policy and natural resource professionals will gain the thorough understanding of administrative law needed to navigate wetlands policy — and may even enjoy it.



[*Wetland Restoration and Construction: A Technical Guide*](#), recently published by [The Wetland Trust](#), provides clear, logical, step-by-step instructions that explain how to design and establish naturally-appearing and functioning wetlands for wildlife, fish, cleaning runoff, recharging groundwater, and reducing flooding. Author [Thomas R. Biebighauser](#) reveals practices used to restore over 1,400 wetlands in 18 states and two Canadian provinces, answering questions asked by thousands of who have taken the hands-on wetland restoration workshops he has taught across North America. Over 650 detailed color drawings and photographs illustrate highly effective and inexpensive techniques for restoring wetlands. Whether your aim is to carry out a complicated mitigation project or to simply help wildlife, this book will expertly guide you through the steps required to build a successful wetland.

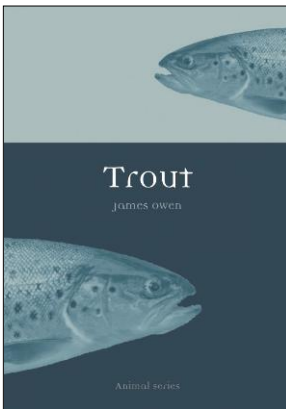


Stream channels are modified to meet a wide range of social and ecological goals. Many small-scale projects that involve adding wood and rock to rivers and their banks are aimed at improving fish habitat or protecting riparian property. Integrating recreational goals and safety into projects can foster public support for projects, encourage recreational use and stewardship, and reduce the likelihood of avoidable accidents. [*Integrating Recreational Boating Considerations Into Stream Channel Modification & Design Projects*](#), recently produced by [American Whitewater](#), aims to offer stream modification practitioners simple advice on how to create projects that meet their primary objectives while ensuring the projects are relatively low-risk and enjoyable for people descending the stream in canoes, kayaks, and rafts. It is intended for use by anyone planning to add or remove material (typically rock and wood) from a stream, or otherwise change a stream's shape or function. Click [here](#) to download the document and [here](#) for more info.



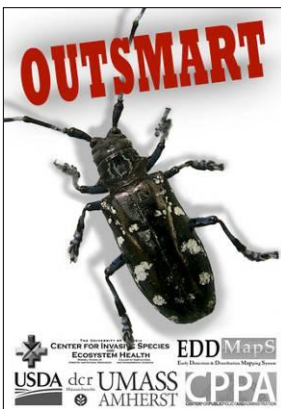
The Northeast has the dubious honor of some of the nation's most fragmented river systems, with [an average of seven dams interrupting every 100 miles of river](#). As river herring and other fish engage in their seasonal migratory upstream journey, they face a gauntlet of dams. In the newly-released report [*Northeast Aquatic Connectivity: An Assessment of Dams on Northeast Rivers*](#), a team of biologists and policy experts (including DER staff) from throughout the region has developed a means of weighing the ecological impact of these dams, data that can be critical to securing and targeting limited funds for river restoration efforts. "For the first time, we can easily quantify and compare how removing different dams might affect the ecology of river systems throughout the Northeast, allowing us to more successfully work at the scale of nature," said Colin Apse, Senior Conservation Freshwater Adviser at The Nature Conservancy (TNC) and a lead scientist on the project. Click [here](#) to download the report, [here](#) to read the press release and [here](#) for more info. [Click [here](#) to read an article (beginning on p.2) entitled [*Dam Removal: Opportunities and Benefits*](#). Written by Steve Long and Alison

Bowden of [TNC's Massachusetts office](#), the article highlights DER's dam removal projects.]



Leaping effortlessly from bright streams into the human imagination, the trout has an ancient fascination that can be traced back to Stone Age cave dwellers, and it thrives today in our diet, religion, folklore, history, science, literature, and, of course, fishermen's tales. In the new book [*Trout – a cultural and natural history of trout*](#), author James Owen reveals why the trout beguiles us so. Taking myriad forms, the fish has a vitality and physical beauty that brings to mind pure waters and quiet, outdoor spaces. This biography of the trout showcases the animal as sacred fish, edible fish, farmed fish, and a fish of scientific investigation. In telling this story, Owen follows the trout around the world: starting in Europe and North America, he then follows the voyage that took the creature from England to Australia in the nineteenth century. Along the way, he presents a diverse cast of characters, from obscure British saints and fly-fishing nuns to visionary inventors, jazz singers, and counterculture novelists—all united by this magical animal. Click [here](#) for more info.

The video [*Sex and the Suburban Frog*](#) discusses deformities in green frog populations and pharmaceutical contaminants. The researcher in this video, [David K. Skelly](#), is Professor of Ecology and Evolutionary Biology at the [Yale School of Forestry and Environmental Studies](#). Skelly claims that 21% of frogs in suburban ponds across the United States suffer from reproductive deformities. Synthetic estrogens released into U.S. waterways are thought to be at the heart of the problem. Click [here](#) to read an interview of Dr. Skelly where he discusses his research and other topics.

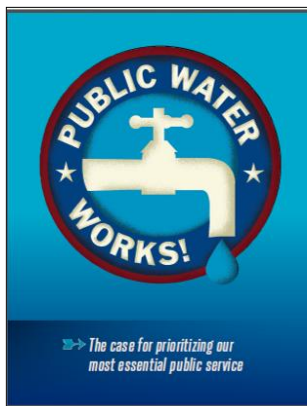


The goal of the new [Outsmart Invasive Species](#) project, a collaboration between [UMass/Amherst's "MassWoods" Forest Conservation Program](#), the Mass. Dept. of Conservation and Recreation (DCR) and the [Center for Invasive Species and Ecosystem Health at the University of Georgia](#), is to strengthen ongoing invasive species monitoring efforts in Massachusetts by [enlisting help from citizens](#). The [web- and smartphone-based approach enables volunteers to identify and collect data on invasive species in their own time, with little or no hands-on training](#). It is hoped that by taking advantage of the increasing number of people equipped with iPhone or digital camera/web technology, this approach will expand the scope of invasive-species monitoring and help control outbreaks of new or emergent invasive species that threaten our environment. Click [here](#) to read a recent article and [here](#) for more info on and to download the [new "Outsmart Invasive Species" iPhone app](#).

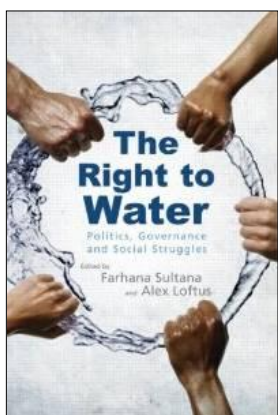


Green infrastructure helps stop runoff pollution by capturing rainwater and either storing it for use or letting it filter back into the ground, replenishing vegetation and groundwater supplies. Examples of green infrastructure include green roofs, street trees, increased green space, rain barrels, rain gardens, and permeable pavement. These solutions have the added benefits of beautifying neighborhoods, cooling and cleansing the air, reducing asthma and heat-related illnesses, lowering heating and cooling energy costs, boosting economies, and supporting American jobs. [*Rooftops to Rivers II - Green Strategies for Controlling Stormwater and Combined Sewer Overflows*](#), released last fall by the [Natural Resources Defense Council](#) and

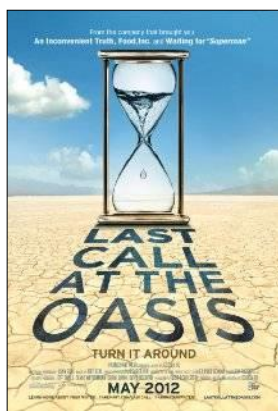
an update to its first [Rooftops to Rivers](#) report (2006), provides case studies for fourteen geographically diverse cities employing green infrastructure solutions to address stormwater challenges. These leading cities have recognized how stormwater, once viewed as a costly nuisance, can be transformed into a community resource. Click [here](#) to download all or part of the report and/or view video segments filmed in several of the featured cities, [here](#) to read an NRDC blog posting about this report, and [here](#) to see NRDC's other water-related publications.



One of the key findings of [Public Water Works! The Case for Prioritizing Our Most Essential Public Service](#), a recently-issued report by the Boston-based advocacy group [Corporate Accountability International](#) (CAI), is that people across party lines overwhelmingly support the critical need to invest in the nation's public water systems. *Public Water Works!* documents how, over the last 35 years, the federal commitment to public water systems has gone from covering 78 percent of clean water spending to a paltry three percent today. In fiscal year 2010 federal appropriations reached a 16 year high of \$1.4 billion – less than one-tenth of what was needed to close the annual water infrastructure investment gap. Further, the report highlights the fact that closing the investment gap would generate \$265.6 billion in economic activity and create close to 1.9 million jobs over the next five years. Reinvestment could also spare businesses \$734 billion in costs and sales lost due to unreliable water infrastructure. This is not to mention that capital investment in water creates more jobs than any other infrastructure sector. Click [here](#) to download the report, [here](#) for the sign-on letter and [here](#) for more info.



While [the right to clean water has been adopted by the United Nations as a basic human right](#), how such universal calls for a right to water are understood, negotiated, experienced and struggled over remain key challenges. [The Right to Water: Politics, Governance and Social Struggles](#) elucidates how universal calls for rights articulate with local historical geographical contexts, governance, politics and social struggles, thereby highlighting the challenges and the possibilities that exist. Bringing together a unique range of academics, policy-makers and activists, the book analyzes how struggles for the right to water have attempted to translate moral arguments over access to safe water into workable claims. This book is an intervention at a crucial moment into the shape and future direction of struggles for the right to water in a range of political, geographic and socio-economic contexts, seeking to be pro-active in defining what this struggle could mean and how it might be taken forward in a far broader transformative politics. Click [here](#) and [here](#) for more info.



Inspired by the book [The Ripple Effect](#) by Alex Prud'homme, and firmly establishing the urgency of the global water crisis as the central issue facing our world this century, the new documentary film [Last Call at the Oasis](#) illuminates the vital role water plays in our lives, exposes the defects in the current system, and shows communities already struggling with its ill-effects. Featuring activist Erin Brockovich, respected water experts including Peter Gleick, Jay Famiglietti and Robert Glennon and social entrepreneurs championing revolutionary solutions, the film posits that we can manage this problem if we are willing to act now. Although *Last Call* is not due for theatrical release until May, you can [read a review of the film](#), view the film's trailer by clicking [here](#), and learn more about the issue [here](#).

Expanding water reuse--the use of treated wastewater for beneficial purposes including irrigation, industrial uses, and drinking water augmentation--could significantly increase the nation's total available water resources. Recently published by the [National Academy of Science's Division of Earth and Life Studies](#), [Water Reuse: Potential for Expanding the Nation's Water Supply through Reuse of Municipal Wastewater](#) presents a portfolio of treatment options available to mitigate water quality issues in reclaimed water along with new analysis suggesting that the risk of exposure to certain microbial and chemical contaminants from drinking reclaimed water does not appear to be any higher than the risk experienced in at least some current drinking water treatment systems, and may be orders of magnitude lower. This report recommends adjustments to the federal regulatory framework that could enhance public health protection for both planned and unplanned (or de facto)

